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Farm · Home · School

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**SINCE
1858**

MACDONALD'S *Quality Tobacco Products*



A Fair Share of Stable Returns

Agriculture is too important to the world to be left to the whims of chance. That was the thought that H. H. Hannam, president and managing director of the Canadian Federation of Agriculture, left with businessmen and professional agriculturists at a meeting reported in this issue.

The farmer must take enough of a gamble at best. Weather, plant or animal disease, insects, ill health, accidents — any of these may wreck the most carefully laid plans. But in the past farmers have been taking another big chance, in producing for unknown markets.

Until recent years Canadian farmers never had the advantage of producing for a known market. Manufacturers usually know what they will get for their product before it is made; but before the war, when a farmer seeded his crop or put cattle into the feed lot, he had no idea of how much he would be able to get for them when marketing time came along.

But having had a taste of stabilized markets for the first time during the war, farmers now consider them very important for the future. We want to know that the costs we incur will have a reasonably good chance of being recovered this year, and next year, and in the more distant future. We want a stable market at a reasonable price determined far enough ahead to let us plan our program and follow it through with confidence that our costs will be repaid, and that we will have a little left over to help us enjoy life.

Nor is the farmer the only one who sees the need for stability in agricultural prices. The Economist, an English publication that has long enjoyed world prestige for its sound judgment in national and international affairs, recently stated:

"The position of the producer has been intolerably and unnecessarily unstable. No manufacturer is left in complete ignorance of the price he will ultimately receive

for his product. Such conditions are unbusinesslike as well as unfair."

A proper balance between returns to agriculture, labour and industry is essential for a prosperous economy, without booms or depressions. This means that more attention will have to be given to the manner of working out this balance.

The Canadian Federation of Agriculture considers the relationship of present returns so unfair to the farmer and so unhealthy from a national standpoint that it has urged the Government to appoint a Royal Commission to survey this whole field and make recommendations in the national interest. It believes that concerted action of this kind, to get the facts of the situation established and use these facts as the basis for whatever action is necessary to attain and maintain a balanced economy, is the only statesmanlike way of meeting the problem.

The Federation believes in orderly production and orderly marketing of farm products, as well as those of industry. It believes that security for the farmer and abundance for the consumer can best be achieved if we have order in our food program all the way through from the farm to the world market.

No reasonable person will quarrel with this attitude. It is the very acme of fairness. No special privilege is asked — only action to see that everybody gets the just fruit of his labour. So we have no hesitation in urging farmers to support the Canadian Federation of Agriculture in its appeal for justice.

Our Cover Picture

Although snow is still on the ground as this issue goes to press, it won't be long before the bees are buzzing busily among the blossoms on the apple trees. Walter Whitehead took this month's cover picture.

Any article in the *Journal* may be reprinted if the source and the author are credited.

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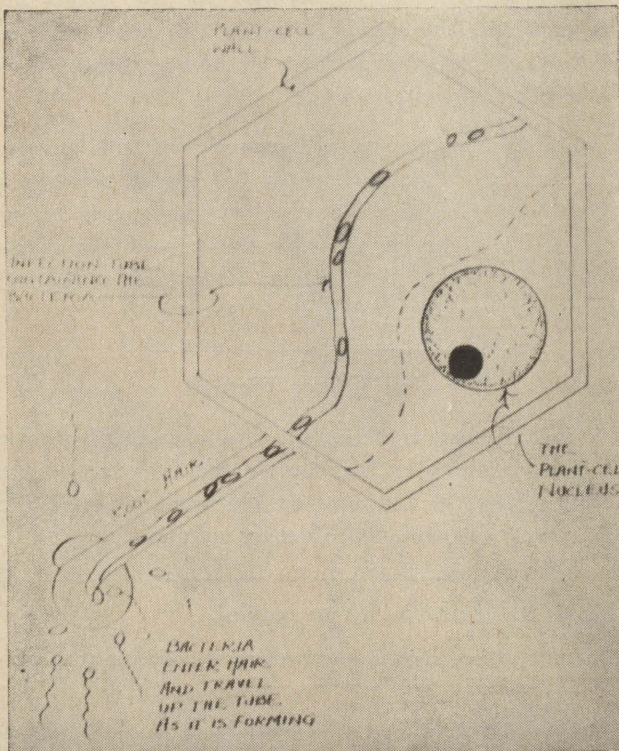
Why Are Legumes Different?

by P. H. H. Gray

WHY do legumes provide better hay and pasture than grasses? And why are they more effective than other plants for building up the soil? This double-barrelled question puzzled both farmers and scientists until it was finally solved not so long ago.

The ancient Greeks knew that if they ploughed a crop under it improved the yield of the next crop on that field. They knew, too, that lupins gave greater results than cereals when ploughed under. But they didn't know what made the difference in either case. And there was little progress toward finding the answer until the seventeenth century, when the alchemists discovered that plants were far more interesting than an imaginary philosopher's stone.

When the alchemists were succeeded by the chemists the attempt to unravel the mysteries of plant life began to speed up. The most essential plant foods were identified; and here again, the difference between legumes and other plants showed up. It was discovered that most crops needed to be supplied with nitrates, either from decomposed manure or nitrate salts. But research in Germany showed legumes would thrive when no nitrates were supplied. Yet legumes, on analysis, were higher in nitrogen than the other crops.



Above—Bacteria enter the root hair at the lower left, and travel up into the plant cell through an infection tube. Once inside, many escape from the tube and cause plant cells to multiply rapidly, producing nodules.

Probing the mysteries of Nature, scientists have discovered how farmers can improve their crops and their land by cooperating with billions of invisible bacteria. Here is the interesting story of what has been discovered and how it can be applied.

This was true of all the legumes — peas and vetches, clovers and alfalfa.

The next question was: "Where does the legumes' nitrogen come from?" A couple of English scientists at the now world-famous Rothamsted Experimental Station tried to find the answer, suspecting that it lay in the nodules on the roots of legumes.

These nodules had been noticed as far back as 1535, and bacteria were discovered in the nodules about 1860. Scientists had also found out what happened to manure that just disappeared when ploughed under. It was changed from its original form into a type of material that plants could readily use. And now we know that it was bacteria—billions of bacteria working through every day and night — that wrought the change.

The English scientists suspected that legume nodules contained a special sort of bacteria that attracted nitrogen out of the air, stored it in their own cells and, after death, passed it on to the legumes. Their work showed that this was, indeed, the case.

The next question was: "How do the bacteria get into the roots, and what effect do they have on the growth of the plant?"

Investigators found that each plant, in its infancy has thousands of tiny hairs on its tap root, and on the lateral roots that push out later. It feeds by taking in mineral salts through the hairs — salts prepared for its use by bacteria in the soil.

Here and there a small bunch of special bacteria cluster around legume roots, as a result of some stimulus sent out by a root hair. These bacteria blast their way into the hair and creep up it in a little tube, toward the main stem. As they follow the meandering tube they excite the plant cells so that they swell and multiply rapidly. This results in a visible growth, the nodule.

Many of the bacteria escape from the tube at weak spots, and eventually occupy a great deal of space in the plant cells — but without doing the plant any harm. Their progress can be followed under the microscope, by examining thin sections of the nodule as it develops. The diagrams that accompany this article give an idea of how they operate.

(Continued on page 11)

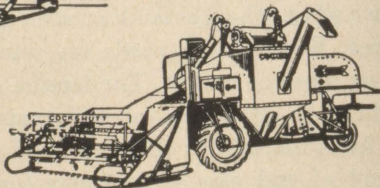
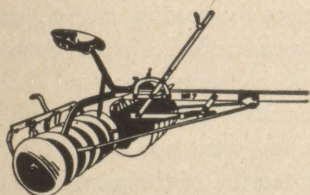
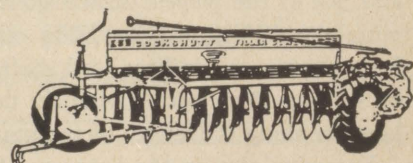
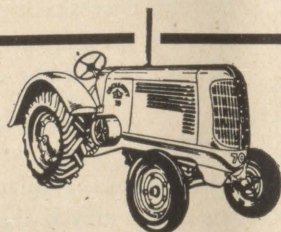
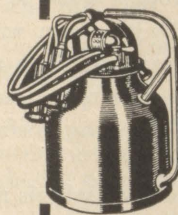
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Getting the Seed Drill Ready

by J. H. Cooper

DESPITE its growing competition the grain drill is still popular in most regions in Eastern Canada. This popularity is due to its accurate control of depth of seeding, uniform distribution of seed in evenly spaced rows, and the drill's ability to cover the seed and firm the soil about it, if desired.

But these advantages follow only if the drill is in good operating condition. It is best to check it right after seeding is completed. But if it wasn't checked, cleaned, repaired and greased last season the job should be done now, so the drill will work properly this spring.

If fertilizer was left in the hopper from last year it will have to be softened and washed out with warm water before the drill can be used. In any case the disks and other bright metal surfaces should be carefully cleaned and oiled to prevent rusting, and all bearing surfaces should be covered with grease.

Jack up both sides of the drill so that both wheels may be turned freely. The machine should be put into gear, and one of the wheels turned slowly by hand, to determine the mechanical condition of the different parts. Struck grain or fertilizer feed shafts should be loosened by turning them with a wrench, tapping lightly with a hammer along the length of the shaft.

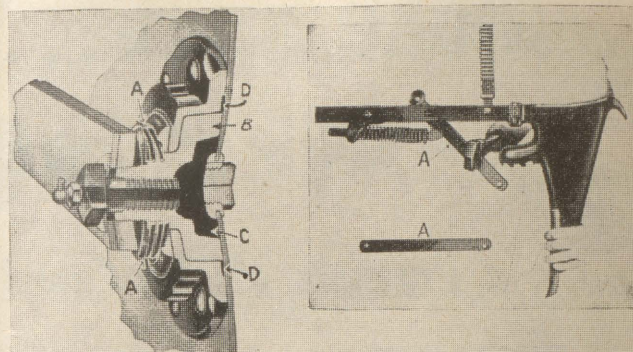
Excessive play in the bearings of the furrow openers indicate worn bearings, which should be replaced. The usual cause of such bearing failure, providing that good lubrication practice has been followed, is breakage or rupture of the dust seal about the bearing. This bearing usually operates below the surface of the ground, so that all dust and dirt must be kept out with a proper seal. A note of the parts numbers of the required replacement parts should be made.

Seed and fertilizer hoppers should be carefully examined, paying particular attention to the condition of the grain and fertilizer feeds. Frequently fertilizer hardens between the fertilizer fingers, causing breakage. The seed tubes, which are made of a special steel ribbon, should provide a smooth, clear passage for the grain and fertilizer. Corroded or rusted seed tubes should be replaced.

Testing Furrow Openers

After replacing the worn or defective parts of the furrow openers, they should be raised from the ground and tested for looseness at the drag bar or at the frame. All such connections should be tightened or crooked seeding will result.

One-half of the disks of the furrow openers lead in one direction, the other half lead the other way. Any difference in "lead" at this point is usually caused by a bent



Left—Cross section of disk furrow opener: A—Dust seal; B—Bearing; C—Grease chamber; D—Disk.

Right—Rusted or corroded seed tubes should be replaced.

drag bar, which should be bent back to its proper shape and position.

The pressure springs which force the furrow openers into the ground should all be of the same length and pressure; broken or defective springs should be replaced.

The disk scrapers are subjected to hard use and wear rapidly, necessitating frequent replacement. If the disk scrapers are still serviceable, they should be adjusted to fit the shape of the disks.

Wheels, Pawls and Ratchets

The pawl and ratchet drive, which is placed in the wheel hub, is similar to an over-running clutch. When the drill is moved ahead it drives the seeding mechanism; but if the wheel is turned backward the pawls merely slide over the ratchets and do not cause the feed shaft to turn. The wheel should be removed and thoroughly cleaned. Examine the pawls for wear and replace any that are worn or broken. The tension of the pawl springs should all be equal; replace weak springs.

When reassembling the wheel and drive parts, a small amount of end play is necessary for satisfactory operation. The drive wheel should then be turned by hand to find any lost motion in the drive. The feeding mechanism should turn as soon as the wheel begins turning.

The balance spring attached to the lifting lever assists the operator in raising the furrow openers when the spring is over-centre, and also helps in forcing the furrow openers into the ground. This should be adjusted to the proper tension.

All drive chains should be cleaned and examined to determine fitness for use. They should be dipped in oil before reassembly, except when seeding in light, sandy soils where they should be run dry.

Drag chains drawn behind the furrow opener are used as seed covering devices. These chains should have the proper number of links; and any misshapen links should be restored to their original shape.

Calibration of Drill

After completing the overhaul, the operator should determine if the drill is seeding at the rate shown by indicator on the seed hopper. This is done by jacking up the drill into working position with the seed box level fore and aft and sideways. A large canvas is then placed under the drill to catch the grain, the seed hopper is filled, the indicator set to the proper position on the scale, and the wheel turned over with the gear engaged enough times to seed a quarter acre. Divide 43,560 (43,560 square feet equal 1 acre) by the width in feet of the strip seeded by the machine. The result will be the length of a continuous strip to seed one acre. To find the number of times the drive wheel must turn in covering this length, divide the length of the strip by the circumference of the wheel. Divide this by 4 to get the number of turns to seed a quarter acre. Mark the rim of the wheel and turn it over the required number of turns at the same speed it would travel in the field.

The grain which has been collected on the canvas should be weighed or measured and should check with the indicator setting. If it is more or less than it should be, the feed shifter should be adjusted to obtain the proper setting.

After the seeding is finished the drill should be carefully cleaned and put in condition for next season's seeding before being stored. This is especially important if it is a fertilizer drill, as commercial fertilizers corrode the metal parts. A little attention after seeding this spring, following the routine suggested, will mean that the drill is all ready to go to work next season.

Cutting Work With Hogs

Three feeding experiments conducted at the Central Experimental Farm, Ottawa, in which pigs were self-fed, demonstrated that quality bacon can be produced, if certain precautions are taken. In these experiments over 70 percent of the pigs produced Grade A carcasses.

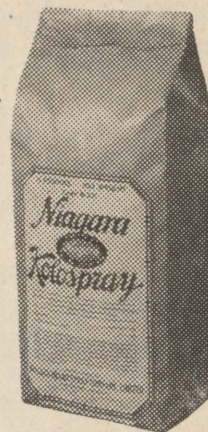
The type of hog and the quality of feed are factors of major importance to be considered. Short pigs, for instance, which tend to overfinish in any case, are not as good prospects for self-feeding as longer pigs which grow a bigger skeleton before putting on fat. Although the experimental pigs at Ottawa were fed indoors, some pigs need extra exercise when self-fed. Many feeders follow a practice of self-feeding until the pigs reach about 150 lbs. in weight, then finishing them by hand feeding. This is to be recommended if premiums are being lost through overfinish.

What Does It Cost You?

Here's another angle on parity prices. On 204 Pennsylvania farms the cost of making hay varied from a low of \$1.18 a ton on one farm to a high of \$14.34 on another. The average for the 204 farms was \$4.68; but on farms using three-man pick-up balers it averaged \$3.22 and where car buckrakes were used it averaged \$2.28.

SCAB!

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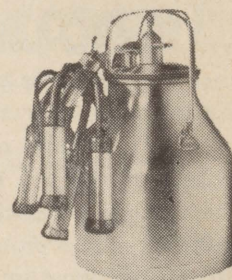
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Plan for Poultry Pastures Now

by N. Nikolaiczuk

A CONTINUOUS stand of succulent green stuff for poultry is a necessity for economical rearing of healthy, well-grown pullets and for maintaining summer layers. Most large-scale commercial poultrymen capitalize upon the many advantages of summer forage. A planned pasture program would also pay rich dividends for the average farm flock. A dense mat of leafy forage saves feed, provides a reserve of vital nutrients and helps to keep the flock free from parasites.

Summer pasture adds to the economy of production. Cornell studies show that, in rearing pullets on grass pasture, the dry feed intake was reduced 7 to 22 percent as compared with bare range depending on the amount of dry feed allowed. The feed was restricted by closing mash and grain hoppers till noon, with a 20-minute period of grain feeding in the evening. The net effect of this feeding schedule was to encourage more grazing. Other experiments show that good pasture, with some restriction of dry feed, can be expected to save 10 to 15 percent of the total feed without affecting the body weight of pullets, their sexual maturity or subsequent egg production and mortality.

Investigations at the Kentucky Agricultural Experiment Station reveal that good pasture will reduce laying mash consumption by approximately 20 percent. The unrestricted use of pasture for layers will cause dark coloured yolks in some cases, but this can be overcome by allowing access to grass for only half the day.

Supplies of Expensive Nutrients

Green forage is a rich source of expensive nutrients which would otherwise be purchased in the prepared mash. It contains protein of high quality—in the case of leguminous plants up to 20%—and a wealth of carotene, the mother substance of vitamin A. Grass is a particularly good source of riboflavin and other B vitamins. In addition, legumes offer a fair supply of calcium and phosphorus. The exposure of birds on range to sunlight ensures adequate vitamin D.

These nutritional qualities are valuable supplements to a comparatively inexpensive mash mixture and thereby permit another direct economy in feed cost. Furthermore, a liberal allowance of pasture exceeds the immediate requirements of birds for the above nutrients. As a result, large reserves are built up within the body, which can be drawn upon at later periods of insufficiency. This obviously safeguards future health and productivity.

Alternative Methods

Good pasture can be provided in either of two ways. The first method is to provide an annual crop for pasture. Oats, wheat, rye, barley or millet are sown at different intervals during the spring and summer to maintain a

constant supply of green feed. Of the cereals, oats are favoured for general use; and rye, sown in the fall, will yield the earliest stand of spring pasture. Best results are obtained when a heavy sowing of cereals is practised—3 to 6 bushels per acre. This plan calls for movement of range shelters and feed hoppers to a new strip of pasture as soon as one is grazed down and the adjacent sowing is 6 to 8 inches in height.

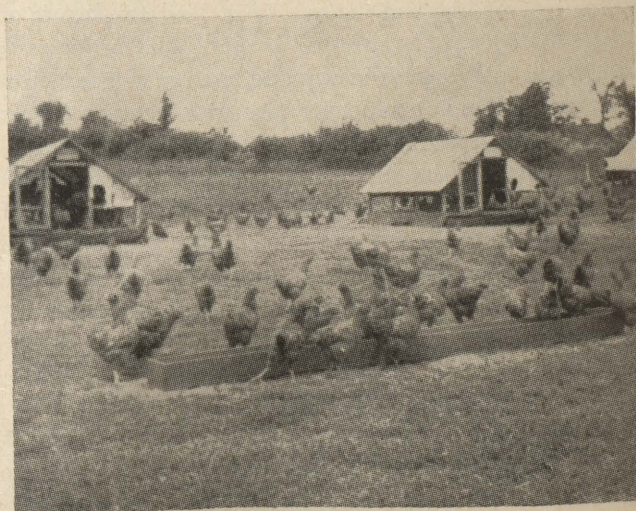
The annual crop range requires timely cultivation and plentiful moisture for germination during the summer, and is more expensive because of the cost of seed and cultivation. But the quality of the pasture is controlled and it can supply forage for 500 to 1,000 birds per acre, depending upon the locality and soil fertility.

A more popular method makes use of permanent pastures of perennial grasses and legumes, either for the use of poultry alone or alternately with large animals. Here again, the kind of poultry range that gives best results is one that provides an abundant supply of succulent, palatable and nutritious green feed during the spring, summer and fall months. A mixture of grasses and legumes is best. The preparation of the soil, suitable grass mixtures and subsequent management practices under Quebec conditions are completely outlined in the Recommendations of the Provincial Pasture Committee (Circular No. 119, Department of Agriculture, Quebec).

The chief advantages of permanent pasture lie in economy, reduced labour and flexibility. An established, well-managed permanent pasture will carry 300 to 500 birds per acre.

Management of Summer Range

The observance of a few simple rules will add greatly to the success of a pasture program for poultry. In order to avoid overgrazing and "wearing down," which result



Good pasture saves feed and grows healthier birds.

in bare spots, range shelters should be placed at least 200 feet apart. While the shelters should be moved once or twice during the summer on a permanent pasture, it is necessary to follow new growth on annually sown strips, and the feed and water equipment must be moved at least twice a week to maintain sanitary conditions. This allows the grass to re-establish itself on the bare areas resulting from the heavy traffic.

Local conditions of seasonal moisture, soil fertility and soil type determine the rate of growth of forage. This, in turn, establishes the carrying capacity of the range. The best results are obtained when grazing and recovery of permanent pastures are in good balance, as shown by the ability of the forage to maintain its growth despite constant use. On permanent range, it is particularly important to keep the stand of grass leafy and succulent, by periodic clipping with a mower to a height of 3 to 4 inches if the pasture gets ahead of the birds.

Finally, provision should be made for rotation of pasture on a three-year basis, whether it is annual or permanent. This rotation prevents excessive contamination of the soil with droppings and keeps down in this way worms and other soil-borne organisms. Pastures handled in this way can contribute an economical source of nutrients year after year without incurring the hazard of disease.

War Assets Trucks

The Quebec Council of Farm Forums, in co-operation with the Cooperative Federee, L'union Catholique des Cultivateurs and the Quebec Department of Agriculture, has been responsible for the distribution of 4-wheel drive army trucks declared surplus and offered for direct sale to bonafide farmers through the facilities of the War Assets Corp. Trucks have been made available in three categories: Heavy Utility Personnel, 15 cwt., and the 3 ton truck.

By an arrangement made with the War Assets Corporation about a year ago through the Canadian Federation of Agriculture, a commitment was made that 400 trucks would be released to the co-operating farm organizations in the Province of Quebec for direct sale to farmers. These have been rather slow in moving out, but to date 247 trucks have been sold: 27 H.U.P., 184 15-cwt., and 36 3-ton. The balance of 153 trucks have still to be declared surplus.

The Council circulated application forms early in the Spring to the English speaking farmers of the Province, large numbers of which were returned until the middle of July which was the deadline. In all, over 1,000 applications have been received. These are drawn on a lottery basis at the headquarters of the U.C.C. by the officials of all the four cooperating organizations when a new assignment of trucks have been declared surplus.

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WITTE DRAG SAW, excellent condition with 3 h.p. gas engine and two 5 ft. blades, cost \$300....	\$175.00
ROTARY HOE, 13 ft. wide, good for killing weed seedlings in corn and other row crops	\$ 40.00
SNOW SCRAPER, Barry No. 125, 6 ft., horse drawn	\$ 15.00
CORN SHELLER, Farquhar single hole hand machine	\$ 4.00
MOWER KNIFE GRINDER, McCormick-Deering	\$ 4.00
DISC FURROW OPENERS for Massey-Harris No. 2 Corn Planter	\$ 4.00
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Figuring Out Your Garden

by H. R. Murray

GARDEN enthusiasts are often exceptionally well informed on such fundamental principles as location, type of soil, drainage and fertilizers. But they are likely to become rather vague when the conversation turns to such matters as "What to plant?" "When to plant?" and

"How much to plant." Furthermore, their purchases from the seed store are likely to be very erratic, even to the extent of either buying everything shown, or buying only the brightly coloured novelties which are found on the cover pages of any seed catalogue.

Row No.	Distance between rows	Kind and Variety	Distance between plants in the row	Possible succession crop
GROUP I—Approximate date of seeding and planting May 1st				
1	12"	Onion sets, Ebenezer	2-3"	Fall beans, July 10
2	12"	Onion seed, Yellow Globe Danvers.....	2"	—
3	12"	Onion seed, Red Globe.....	2"	—
4	15"	Spinach, Bloomsdale Long Standing.....	4"	Fall beets, July 1
5	15"	“ King of Denmark.....	4"	—
6	12"	Lettuce, ½ Grand Rapids	4-6"	Fall cabbage and cauliflower seeded May 20 transplanted June 25
		“ ½ Unrivalled	8"	
7	15"	“ ½ New York (early)		
		“ ½ New York (late)	10-12"	
8	12"	Radish, ⅓ Saxa		Fall lettuce seeded July 15 to 20
		“ ⅓ Scarlet Globe		
		“ ⅓ White Icicle	1"	
9	24"	Cabbage, ½ Golden Acre; ½ Glory of Enk.....		Fall lettuce seeded July 15 to 20
10	24"	“ ½ Succession; ½ Jersey W.....	18-24"	
11	24"	Cauliflower, Ey. Snowball.....	20"	
12	12"	Summer turnip, Pur. Top Milan.....	3"	
GROUP II—Approximate date of seeding May 10th				
13	12"	Beets, ½ Ey. Wonder; ½ 1 week lated.....		Fall spinach seeded July 25 Fall carrots seeded July 1
14	12"	“ ½ Detroit Dark Red; ½ 1 week later.....	2-3"	
15	12"	Carrots, Nantes	1-2"	
16	24"	Peas, ½ Laxton Progress; ½ Laxtonian.....	2"	
17	24"	“ ½ Onward; ½ Tall Telephone.....	2"	
GROUP III—Approximate date of seeding and planting May 20th				
18	24"	Beans, ⅓ Bountiful		For Row 18 succession crop seed Fall beans immediately first crop is finished.
	24"	“ ⅓ Tendergreen	3"	
	24"	“ ⅓ Stringless Refugee (G.P.).....	3"	
19	24"	“ ½ Brittle Wax		
		“ ½ Stringless Refugee (Y.P.).....	3"	
20	30"	Tomatoes, John Baer.....	18"	
21	30"	Sweet corn, Dorinny.....	10"	
		with		
		*Squash-Acorn, as an intercrop.....	18"	
22	30"	Sweet corn, Ey. Sweet.....	12"	
23	36"	Sweet corn, Golden Bantam.....	12"	
		with		
		*Squash, Green Hubbard, as an intercrop.....	30"	
24	36"	Ey. Potatoes, Irish Cobbler.....	12"	
25	36"	Late Potatoes, Green Mountain.....	12"	
26	24"	*Swede Turnips, Laurentian.....		

* Do not seed until after May 25th to May 30th.

† Seed June 10th.

This, of course, is not very sound gardening, even for an out-and-out amateur. Good planning is as fundamental to success as the right location, the best types of soil, good drainage and proper fertilizers. A good plan should always include the proper time for planting, the right kinds, and varieties to plant together with recommended quantities for every purpose and the right amount of seed to buy.

The plan on page 8 shows the different crops and varieties recommended, with their exact location, the probable dates of seeding or planting, the spacings between and in the rows, and the location and dates of succession plantings. It does not, however, deal with quantities because there is always the question of individual preference in every family, the size of the family, and whether or not storage or canning is to be undertaken. Naturally, all these factors will govern the quantities to be provided for by each individual garden plan.

It is necessary, after outlining the plan in principle, to adjust it for the quantity of each vegetable to be grown for that family, after consulting the table on "How much to grow."

If the plot of land available for the garden is not

oblong in shape, or 25 feet wide or nearly so, some confusion may arise when the plan is being adjusted. However, keep in mind that the number of rows may be increased, or the length of the rows increased, or several rows may be combined, bringing together vegetables which are planted in rows the same distance apart, and at the same time.

For example, the rows of all kinds of onions may be combined, the rows of onions, radishes, lettuce and spinach may be combined, the rows of beets and carrots may be combined or the radishes may be sown in the rows with onions, beets and carrots (not more than 20-30 per cent of the total seed), to be removed before they crowd the other companion crop. In fact many schemes may be worked out without altering the fundamental principle of grouping for time of planting.

Consult your plan when considering the number of feet per row for each variety, because the total length of row may be made up of more than one variety or the same variety planted at different times, or as a succession crop.

Consider 2 people as a basic number; and if there are more people in the family increase the row length accordingly, depending upon individual preferences.

HOW MUCH TO GROW

Vegetable	For 2 people		Quantity of seed for 25 ft. of row
	Y	S	
Beans, snap	35	12	4 oz.
Beets	35	15	1 oz.
Carrots	35	15	$\frac{1}{4}$ oz.
Cabbage	25	6	1 pkt. (12-plts.)
Cauliflower	25	6	1 " "
Cucumbers	25	12	1 " "
Greens:			1 pkt. lettuce or
Lettuce, spinach and beet tops	180	90	1 oz. each of others
Onions	50	25	1 oz.
Potatoes	125	25	4 lbs.
Other root crops	50	25	1 pkt. each
Sweet corn	125	75	1 pkt.
Tomatoes	25	12	16 plts.

Y — year's supply

S — spring, fall and summer supply only

The Land We Live On

Keeping the Soil Well Fed

Crops draw vast amounts of chemicals from the soil. Some of these may be replaced by feeding the crops to animals and applying the manure to the fields. But unless the manure is properly handled it may not have much value.

by W. A. DeLong

TO grow good crops the soil must contain an ample supply of plant food. And it must be able to deliver this food to the roots in a form the plants can use.

At least 10 plant-food elements are essential for healthy, vigorous crop growth. Of these the most likely to be lacking are nitrogen, phosphorous, potassium and calcium. But some other elements may also be in too low supply to encourage good growth.

Thus, when boron is lacking turnips are subject to brown-heart. Potatoes sometimes suffer from a lack of magnesium, while oats may be unable to get enough manganese to do well.

Average to good Canadian soils contain 1 to 2 tons of nitrogen, $1\frac{1}{2}$ to $2\frac{1}{2}$ tons of phosphoric acid and $2\frac{1}{2}$ to 5 tons of potash per acre in the top seven inches — plough depth. These amounts may seem large. But 50 bushels of threshed oats contain about 100 pounds of nitrogen, 50 pounds of phosphoric acid and nearly 100 pounds of potash. And two tons of timothy hay contain about the same amounts of these elements.

Let us suppose that these amounts of oats or hay per acre are sold off the farm every two years, and that no plant food is returned to the soil. Theoretically, at this rate of removal the supply of nitrogen in the average soil would be completely exhausted in 40 to 80 years, and the supplies of phosphoric acid and potash in 50 to 100 years.

This illustration clearly shows that the policy of selling oats and hay, if consistently followed, will lead to marked reduction in the fertility of the soil.

If, instead of being sold, the oats and hay are fed to cattle and sold as beef or milk, a considerable part of the plant food which they contain may be returned to the soil as farm manure. Further, when legumes are included in the rotation, nitrogen is taken from the air, and the soil supply of this element thereby conserved or even increased. And when mill feeds such as oil cake meal and bran are bought to supplement the farm-grown feeds, a part of the plant food which these contain is returned to the soil.

But even when all these practices are followed, it is



A mechanical loader is used to fill the manure spreader on this Eastern Ontario farm. But it doesn't matter what's used, as long as the manure is properly handled and spread on the ground.

still often necessary to purchase commercial fertilizer so that the land will keep on producing good crops.

Returning to manure—it is the most valuable by-product on most farms. A ton of fresh cow manure contains about 10 pounds of nitrogen, 3 pounds of phosphoric acid and 10 pounds of potash. Pig manure contains about the same amounts of nitrogen and potash, but is nearly twice as rich in phosphoric acid. Sheep manure is nearly twice as rich as cow manure in all three plant-food elements. Poultry manure is about twice as rich as cow manure in nitrogen, three to five times as rich in phosphoric acid and about the same as cow manure in potash.

The liquid manures of the cow and sheep contain half the nitrogen and most of the potash, so it is important to preserve this part of the manure.

The composition of manure varies not only with the kind of animal, but also with the food given, and the age and function of the animal. For example, the manure from beef cattle is much richer in plant food than that of dairy cattle, even when the same kind of feed is used. The quality of the manure also varies with the kind of litter or bedding used, and especially with the care taken in its preservation.

To get full value from manure it must be properly handled from the time it is made until it is in the soil. Stable floors and gutters should be tight enough to prevent leakage of liquid manure, and enough litter should be used to absorb all of this valuable liquid.

Losses through fermenting or heating should be prevented by mixing the hotter manures such as horse ma-

nure and poultry manure, with cooler ones such as cow manure. Heating may also be controlled by keeping the heap firmly packed and reasonable moist. This may be accomplished by letting pigs or other animals tramp over the manure in the shed.

The manure pile should never be exposed to rain, since much of the valuable plant food will be washed away. The heap should be placed on a cement or packed clay floor to prevent loss of the liquid content, and enough litter should be used to keep all the liquid absorbed.

The best storehouse for manure is the soil. If there is no danger of surface wash it may be hauled directly from the stable and spread on the land. On sloping ground, however, surface drainage may cause considerable loss of plant food. Under such circumstances it is better to store the manure until it can be ploughed into the soil soon after application.

It will be noted that cow manure, which usually constitutes the bulk of the manure on the farm, is low in phosphoric acid, in proportion to its nitrogen and potash. This defect may be remedied and the value of the manure improved by the use of small amounts of acid phosphate or superphosphate in the gutters. This also helps to prevent loss of nitrogen, and to keep down odours in the stable.

Even when all the crops grown on a farm are fed to livestock, and the resulting manure carefully handled and spread on the land, not as much plant food is returned as was drawn from the soil. To make up the difference it is wise to use commercial fertilizers. The next article in this series will deal with their proper use.

Why Are Legumes Different?

(Continued from page 2)

The bacteria find life within the nodule somewhat cramped. They feed for some time on the sugar that the plant has manufactured and passed down through special tissues for storage. At the same time they absorb all the nitrogen they need from the air. Then they swell into distorted shapes, and most of them die.

From their bodies the plant absorbs the nitrogen they have stored up during their active growth. This nitrogen gives the legume its fresh green appearance, and makes it particularly valuable as cattle feed or green manure.

Not all of the bacteria die, however. Many escape into the soil when the nodule falls to pieces. And if the field is later seeded to legumes some of them may enter the root hairs and again start the process of nodule-making and nitrogen-fixing.

But they won't usually do this unless the new crop is the same type of legume as the one they formerly used as a host. These bacteria are highly specialized, and don't make nodules indiscriminately. Alfalfa bacteria won't work on crimson clover; nor will the bacteria of

either of these crops operate on beans or lupins.

Nor are there likely to be bacteria of the right sort for a certain crop in the soil unless that crop has been grown there before. This restricted new seedings of legumes for a long time. Then it was discovered that the necessary bacteria could be supplied in a field to be newly seeded by spreading over it 200 to 500 pounds of topsoil from a field where the crop had previously been grown.

Finally, in 1888, a Dutch scientist isolated the bacteria from the nodules, and made it practicable to prepare culture of the bacteria for direct application to the seed. This made it possible to grow legumes on any land that was otherwise suited to them.

Most species of bacteria favour a neutral soil, though some cause nodule formation even when the land is slightly acid. But they must have phosphorus; and better plant growth is obtained when any deficiencies of lime or phosphorus are made up.

A successful take of infection by these bacteria will produce anywhere from 30 to 200 pounds of nitrogen per acre of legume. But if the crop is completely removed and nothing is put back in the form of barnyard manure most of the work of these beneficial bacteria is lost to the soil.

Thanks to the scientists who have spent their lives probing the mysteries of plants, soils and bacteria, it's now a simple matter to inoculate legume seed with bacterial culture. This culture can be obtained, along with instructions for its use, from the agent who supplies your legume seeds.

Semen Coloured for Breed

To distinguish semen from bulls of different breeds for artificial insemination, coal tar dyes of various colours are being used, with no adverse effect on fertility. The colours used by Pennsylvania co-operative breeding units are: Ayrshire, purple; Brown Swiss, brown; Guernsey, yellow (uncoloured); Holstein, green; and Jersey, red.

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GO-OPERATION AND MARKETING

A page of interest to members of farmer's co-operatives

An Integral Part of Co-ops

A large number of already existing Co-operatives of one kind or another have overlooked the importance of Credit Unions as an integral part of their program. Originally prompted by high social aims towards an economic goal, members of a good many Co-operatives finally discovered that their various business enterprises dealing with the production and distribution of goods and services had to face a good many of the same problems and difficulties which profit-motivated business in the same field has to meet. One of the frequently-recurring problems is inadequate finance. How much better it would be if simultaneously with, or even better prior to, the establishment of any Co-operative business a Credit Union had been in operation! This is particularly true with groups considering the development of a merchandising project such as food distribution. The best thing they can do, if they are genuinely interested in Co-operatives, is to begin with a Credit Union. While they are in the process of building it they have an opportunity

to familiarize themselves with the fundamentals which apply to Co-operative technique.

There are fewer hazards involved in the building of Credit Unions than of any other Co-operative undertaking. Rightly approached, they are the perfect proving grounds for testing the people's ability to run their own business. By their very nature, they do not lend themselves to immediate large-scale operation and thus permit time for people to adjust their thinking to the full meaning of co-operation. The records of all the thousands of Credit Unions show that none of them started as a full-fledged banking institution with thousands of dollars of share capital subscribed, but that most of them began with less than \$100. And yet today any number of them are formidable banking houses with thousands upon thousands of dollars of the people's money serving the people's expected and unexpected needs.

And so a Credit Union could and should become the foundation upon which to build the rest of a co-operative structure for whatever purpose it is intended to serve.

Voorhis Takes Co-op League Post

Jerry Voorhis, popular cartel-stalking ex-Congressman from California, has been appointed Executive Secretary of the Cooperative League of the U.S.A.

Prominent U.S. Co-operators have expressed keen approval of the new appointment, pointing out that Voorhis' proven leadership ability will be invaluable in the face of increasing campaigns now being waged against the co-op movement. Voorhis, who is well known in Canada, fills the position made vacant by the retirement of E. R. Bowen, following the latter's 13-year term of office.

For years, in and out of office, Voorhis has waged a personal war on cartels and monopolies, particularly in the oil industry. In accepting his new position he stated "Co-operation is the answer to monopoly. It is stronger than monopoly. It can break monopoly's strangle hold on our industries and give little business a chance."

League's Job

Outlining the job of the League in his acceptance speech, Voorhis said in part that it was "to convince co-operators that they have in their hands the answer to Communists and Fascists, the proof that democracy and freedom can work." It was also "to convince other people that co-operation is not what its enemies have said

it was, but is simply the application of fundamental Christian principles to the everyday problems of life."

Similar in function to the Co-operative Union of Canada, the Cooperative League of the U.S.A. is a national federation of consumer-purchasing co-operatives which have 2½ million families as members.

Hatcheries Are Busy

By the end of the present hatching season, something in the neighbourhood of ten million chicks will have been hatched in Quebec, three quarters of them in co-operative hatcheries. Orders were placed earlier this year, and by the first of March almost twice as many chicks had been hatched as at the same date last year. For this reason, many hatcheries will complete their orders early in the season.

St. Damase has good first year

The St. Damase Poultry Co-operative was organized by poultry farmers of the St. Hyacinthe region in 1945 and has just completed its first fiscal year. Figures show that total sales amounted to \$476,000 with 400,000 dozen eggs and 1,150,000 pounds of fowl handled; 300,000 fowl went through the killing plant. The co-operative has a membership of 350 and serves 27 parishes.

Market Comments

Live stock prices continue to rise as volume of marketings decline. The output of live stock by provinces for 1946 is now available. The year recorded a decline in marketings of hogs, beef cattle and calves and a slight increase in sheep, lambs, and poultry.

The decline in number of hogs amounted to about one-quarter as compared with the previous year. Most of the reduction was in the western provinces, the percentage decline ranging from 45 in Saskatchewan, 36 in Alberta and 29 in Manitoba, to 11 in Quebec and 2 per cent in Ontario. Inspected slaughter for the first eleven weeks of 1947 is down 240,000 in round numbers from the same period of the previous year — a decline of over 20 per cent. Most of this decline was in the western provinces.

Securing feed is still a problem. The reason is lack of transportation. When coal should have been moving by boat the seamen's strike held up work. Later, when grain should have been moving by water coal was being hauled. The result was the freeze-up found elevators almost empty. This placed too great a load on rail transportation. Will the lesson of 1946-47 be given any attention or will the same trouble occur again?

A recent advance in prices of both barley and oats is designed to increase supplies of feed grain. The new ceilings per bushel are 93 cents for barley and 65 cents for oats.

Present prospects are a good maple products harvest at uncontrolled prices.

Trend of Prices

	1946 March	1947 February	March 1947
LIVESTOCK:	\$	\$	\$
Steers, good, per cwt.	13.15	13.60	14.10
Cows, good, per cwt.	9.70	10.60	11.02
Cows, common, per cwt.	7.58	8.60	9.03
Canners and Cutters, per cwt.	6.43	7.78	8.12
Veal, good and choice, per cwt.	15.38	16.50	17.05
Veal, common, per cwt.	13.60	14.73	15.60
Lambs, good, per cwt.	—	15.00	15.75
Lambs, common, per cwt.	10.75	10.20	14.75
Bacon Hogs, B1, dressed, per cwt.	17.97	21.85	21.90
ANIMAL PRODUCTS:			
Butter, per lb.	0.36	0.42	0.41
Cheese, per lb.	0.22	0.23	0.23
Eggs, Grade A, large, per dozen	0.36	0.36	0.36½
Chickens, live, 5 lbs. plus per lb.	0.29¾	0.28	0.29
Chickens, dressed, milkfed, A, per lb.	0.36¾	0.35	0.35
FRUITS AND VEGETABLES:			
Apples, B.C. McIntosh, Extra Fancy, per box	—	3.90-4.00	—
B.C. Newtons	—	—	3.75-3.80
Potatoes, Quebec No. 1, per 75 lb. bag	1.90	1.15-1.25	1.15-1.25
FEED:			
Bran, per ton	29.00	29.00	29.00

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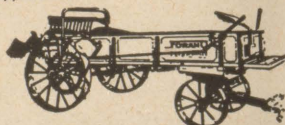
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The Forano All-Steel Thresher is our pride, particularly good performance, quality and quantity; secondly, because it is a well built machine; thirdly, because it has a good appearance.



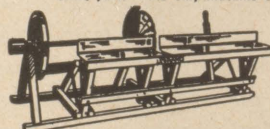
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Forano Root Cutter can be driven by hand or motor. It is roller bearing mounted, rendering it easy to operate.



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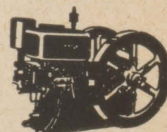


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The stationary Gasoline Engine is gradually regaining the confidence of the farmers because time has proved that slow speed stationary engines last a lifetime without trouble. The Forano is an old timer still on the job.

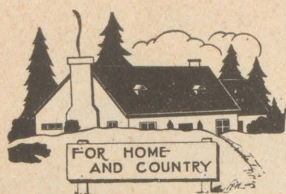


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*Devoted to the activities of the Quebec Institutes
and to matters of interest to them*

Planning the Home Grounds

by F. Grace Yates

April is a time of such feverish activity in the garden that it is difficult to know which task should have first claim to our attention. There is the preparation of the soil, the ordering — and yes, most important of all, there is the planning to be done. Fortunately, a garden is never static; each spring, Nature provides us with a fresh, clean canvas, to do with it what we will. We may improve upon last year's garden, or we may slip backward, but we cannot duplicate it exactly — wind, rain and sun make certain of that. And so, our enthusiasm unabated, we plan anew each season, striving always towards a greater perfection.

This year, though we continue to make generous plantings of vegetables, many of us will feel that we have more time and energy to devote to home beautification. If the grounds became run-down and neglected during the busy war years, now is the time to put into effect our own private rehabilitation schemes. Or perhaps we plan extensive changes; we dream of having a small orchard, a boundary hedge of mixed shrubs, ornamental trees and evergreens, wide perennial borders, etc. But we cannot add all these new features at once and so we may well borrow an idea from the Russians; they can testify to the effectiveness of a five year plan and we can apply the same principle to our gardens, thus extending both the labor and cash expenditure over a period of several years.

Making the Plan

Once we have decided just what features we wish our gardens eventually to include, our next step is to draw a small plan of the home grounds, taking great care to assign each of these features to the spot best suited to it. With everything planned for from the beginning, there is little danger of going out some day and discovering that the asparagus patch is flourishing in what would have been the ideal location for the order of plum and cherry trees, which has just arrived from the nursery!

With our plan—after much revising!—finally completed, we may now proceed to break it up into yearly projects. The slower growing items, such as fruit trees and dwarf evergreens, will be our first concern, of course, along with the lawns and paths. For the second year, we can plan to plant the shrub border, the perennials and some of the ornamental trees. Then, with the "backbone" of our garden firmly in place, we are free

to devote the next few years to any special items we may have in mind — possibly a small rockery, a pool, or collection of some particular flower of which we are especially fond; peonies, iris, glads, lilacs, herbs . . . any one of these would make an interesting and fascinating hobby.

Our yearly plans worked out satisfactorily, there remains the all-absorbing task of poring over the catalogs, selecting the varieties most suited to our location and needs. Today, thanks to the tireless efforts of the nurserymen and hybridizers, there are plants to please everyone's taste and requirements. For example, if we would like to grow a few apples for our own use but hesitate to order the trees because of the elaborate spraying equipment which seems to be required, there are varieties available, budded on special roots that make a tree about two thirds the size of the standard apple tree. Besides coming into bearing earlier than the standard trees, they take up less room, the fruit is easier to pick, and spraying may be done with far less effort and equipment.

The Shrub Border

For the mixed shrub border there are numerous flowering varieties to choose from; however, a few of the berried shrubs are almost a necessity for fall display, while the golden or variegated-leaved kinds can be depended upon to add a striking contrast at all times. Two or three ornamental trees are always good; here the charm of the flowering crabs — especially the hybrids originated at the Central Experimental Farm in Ottawa — cannot be praised too highly, for not only do they give a generous display of bloom in spring, but the autumn harvest of small bright fruits is equally attractive. A flowering catalpa, though seldom seen in home plantings, is exotically beautiful when in bloom, and the large, heart-shaped leaves are showy throughout the season.

And, finally, there is the perennial border planting. Many of the plants for this can be grown from seed, and truly there is no more exciting event in the garden than when some fine perennial, which we have carefully guarded as it developed from a tiny, delicate seedling into a robust, sturdy plant, at long last rewards us with its first burst of bloom. Seeds sown this spring in a cold frame, and given ordinary care, will have made plants large enough for transplanting into their per-

manent homes this fall, for flowering next year. There are, of course, a few varieties that are difficult, but the following can be grown with ease by even the beginning gardener: *Agrostemma Coronaria*, *Arabis*, *Achillea*, *Anchusa Italica* (the dwarf variety, *Myosotidiflora* is slower in starting but is very beautiful) *Alyssum Saxatile*, *Aquilegia*, (try *Crimson Star*) *Aubrietia*, *Bellis Perennis*, *Coreopsis*, *Campanula Carpatica*, (all the campanulas germinate well, but the seed is very fine and must be handled carefully) *Centaurea Montana*, *Cerastium Tomentosum*, *Dianthus*, *Delphinium*, *Myosotis*, *Gaillardia*, *Geum*, *Gypsophila*, *Helenium*, *Heliopsis*, *Hesperis*, *Hibiscus*, *Lathyrus*, *Linum Perenne*, *Lupins*, *Iceland* and *Oriental Poppies*, (the latter, unfortunately, do not come true but are worth growing, nevertheless) *Platycodon*, *Physostegia*, *Pyrethrum*, *Rudbeckia*, *Saponaria*, *Shasta Daisy*, *Thyme*, *Thalictrum*, *Tunica*, *Veronica*. Besides these, there are the lovely biennials, *Sweet William*, *Digitalis*, *Hollyhocks*

and *Canterbury Bells*.

To avoid disappointment, it is better not to try the varieties which are definitely slow in germinating as some, indeed, must be sown in fall, as they require the action of frost and cold, to quicken to life. Among these are *Aconitum*, *Anemone*, *Doronicum*, *Dicentra*, *Dic-tamnus*, *Delphinium Zalil* and *Cardinale*, *Hardy Prim-roses*, *Trollius* and *Sweet Violets*.

Besides germinating poorly, there are still other varieties which do not come true from seed, the resulting plants nearly always being inferior to existing varieties. These should be ordered from the nurseryman in named kinds only and include *Hardy Asters*, *hemerocallis*, *iris*, *peonies*, *phlox*, etc.

It has been said that "there are those who, in gardens, see visions; but others see only from weed to weed." Then let us endeavour, not only in our gardens but in our daily lives, to overlook the weeds and glimpse the visions beyond.

Inspiration from Overseas

This really follows from the short article "Leisure—An Adventure", which I wrote for the November issue of the *Macdonald College Journal*. As a result of reading that article Miss Taylor, Press and Publicity Officer for the National Federation of Women's Institutes, sent me an account of a School for Leisure and Pleasure which was held last summer at Somerville College, Oxford, for members of the Women's Institutes. The

idea appealed to me so much that I wondered if something similar could be worked out for members of our Quebec Women's Institutes. At any rate, I want you to know about this splendid opportunity which came to some of our women in England. So I am asking permission to have at least part of the account printed in the *Journal*. I feel sure that it will interest you as much as it did me.

BERNICE M. DAINTRY

A Week of Leisure and Pleasure at Somerville College, Oxford

"Doing what one likes instead of doing what one must." That was the definition given by Mrs. Vernon of the National Executive of that elusive and so often illusory word "leisure" at the outset of the N.F.W.I. Summer School last July. Lady Brunner, Chairman of the N.F.W.I. Education Sub-committee and also Chairman of the School, in her welcome to the 73 students from 45 counties spoke of the sense of guilt that so many women have developed in having any leisure at all. She urged for time just to "stand and stare".

Certain it was that many of the students—who ranged from 19 to over 70 years in age and who in 45 cases were equipped with bursaries from their counties — had never experienced such a magic week before, withdrawn from cooking, housework, queuing, even the noise and bustle of Oxford, within the walls of Somerville. Each had a room of her own actually and spiritually, time to rest, to think, to discuss. There was an easy routine, broken by good meals with which no student had anything to do at all, of talks by experts followed by practical illustrations and discussion group meetings under the vast green shade of the lime trees on the cool grass of the quadrangle. Each day was given over to the study of a single art and how it could best be appreciated and for this purpose students were asked on arrival to choose

their "art" and to join a discussion group for detailed daily study.

Expeditions to Oxford Colleges were used to illustrate period architecture, a mass visit to Stratford-on-Avon to see Shakespeare's *Tempest* and a concert of old English music in the College Hall were some of the highlights of the week. Lady Albemarle had an enthusiastic reception during her three days visit from many students who wanted to see and to talk to their new National Chairman.

Many were taking their first holiday for six years and more than one member said on the closing days "I wish it had been a fortnight. This has given me something to live for." It was a happy augury for the W.I. College, where we all hope it will be possible for members to recreate themselves regularly, to go into a retreat of the mind and to emerge refreshed and renewed.

RURAL WOMEN'S COLLEGE

About 300,000 rural women in Britain are to have their own college endowed with money raised by themselves. They are members of the National Federation of Women's Institutes which has purchased extensive property near Oxford to be renamed Denman College.

A Month with the W.I.

A wave of fresh enthusiasm is sweeping the Institute this "anniversary year" and surely no better tribute could be paid to the memory of those who laid the foundation of our great organization. This spirit is showing no sign of abatement now that the exact date of the Golden Jubilee has passed. Programmes dealing with the history and work of the Institute are much in evidence and several branches are making drives for new members. Last month Morin Heights reported 10 more members. This month we hear several more have joined. Here is how it was done. Invitations were sent to all ladies in the district who were not members to attend a special meeting. An interesting programme was planned with special emphasis on the growth and objectives of the W.I. This brought the above-mentioned result — A tip for the rest of us.

The sale of F.W.I.C. seals seems to be staging a comeback. Several branches report purchasing a new supply, one branch, Bury, ordering 400 for the use of its members.

Argenteuil: Arundel entertained Miss Walker who gave a demonstration on Milk Dishes. Quilts are being made to aid general funds. A pleasing feature was the presentation of a bouquet of flowers to the president as a reminder of her birthday. Brownsburg heard the story of the Institute and Mrs. Hoodless. A special film was shown in the local theatre on "Anniversary Day", Feb. 19. Frontier discussed the Blue Cross and made plans for their exhibit at the next fair. A practical demonstration was given by a member on mending runs in silk stockings. Jerusalem-Bethany; several members were presented with Red Cross pins in recognition of their faithful service. Reading of some of Edgar Guest's Poems formed part of the programme. Lachute heard a stirring talk on China given by Mr. Royal, principal of the school. The experiences of an army chaplain overseas were also told by the Rev. Mr. McLean. Lakefield planned their meeting as a surprise party for a member who had moved to Lachute. A beautiful vase was presented to the guest of honour. A short business session was held when the Blue Cross was discussed. Morin Heights (see opening paragraph) Pioneer donated \$5 each to these worthy causes; St. John's Ambulance, Save the Children, China and the Red Cross. Two articles were read, "The Founding of the first W.I." and "Getting Ready for the Institute meeting." A poem, "A Bachelor's Prayer", was also given. Red Cross pins were presented to 8 deserving members.

Bonaventure: New Richmond has had no regular meetings during the stormy winter. An executive meeting was held to prepare the programme for the coming

year. Shigawake; this new branch reports a "get-together" the past month.

Brome: Abercorn had a busy meeting when routine business was discussed. Sutton had an interesting programme when several papers were read.

Chat.-Huntingdon: Franklin Centre is starting a fund for prizes in the local school. A demonstration on quilt tops and fancy aprons was given and a debate, "Resolved that a woman can drive a car better than a man", proved amusing. (One wonders what was the decision)

Compton: Bury reports the largest meeting yet held during the year. Gifts were given to war brides, and \$5 to "Save the Children". Approximately 125 pupils are benefiting from the hot cocoa served every day at noon. Scotstown members are taking a two week's course in weaving under the supervision of Miss Walker. Mrs. W. T. Pearson, pres. Sherbrooke Co. W.I., was a guest and gave a talk on the W.I. broadcasts being given over radio station CKTS. The annual report of the Dr. C. M. Smith Memorial was given by that committee and a social period of games concluded the meeting. Mention was made in this report of the Thrift Shop operated by this branch. That is a whole story by itself which we hope to publish shortly. Sawyerville entertained the county pres. Mrs. Parsons who gave a few highlights of the Prov. Board meeting and also discussed the county work. Plans are being made for a card party. South Newport joined with Sawyerville in catering for a banquet for the returned men not honoured before. A series of card parties are being held to raise funds for their allocation of the county project, the W.I. room in the New Sherbrooke Hospital.

Gatineau: Kazubazua distributed and discussed pamphlets from the Health Study Bureau. The School Fair programme was prepared. Wakefield presented the following resolutions to their Town Council; a system for collecting garbage, inspection of chimneys and prohibition of profane language at the local skating rink. An amusing debate is noted which was won by the negative. "Resolved that a tidy, cranky woman is easier to live with than an untidy, good-natured one." Wright gave a prize for regular attendance at meetings. A picture contest, won by Mrs. Ellard and a discussion on how air mail is handled formed the programme.

Gaspe: Wakeham gave \$6 for the purchase of cups and saucers in their school to be used for serving hot lunches. Another generous gesture is noted, money won by members at their W.I. fair, amounting to \$6.45, was donated the Aid to China Fund. Meat coupons are still being turned in monthly to be used to send meat overseas. An interesting letter from the Co. Pres. Mrs. G. Miller, who

is visiting in Sask., was read. York members are assisting the teacher in serving hot lunches in their school. The sum of \$10 was voted to each of the following organizations; Girl Guides, Brownies and Cubs. A prize of \$1 was also voted to the pupil taking highest marks in arithmetic in each room of the school.

Missiquoi: Dunham is another branch with a hot lunch programme and has provided soup in the school during the winter season. Two new members were welcomed and the splendid total of 71 articles has been completed for their local hospital. Fordyce is working for the Red Cross and the programme for next year was drawn up at this meeting.

Megantic: We are very glad to hear again from the Jr. W.I. at Inverness. These girls have just had their annual meeting. They are doing Red Cross work and are planning a sale of home-made articles. Do let us hear from you often, juniors. Inverness seniors report an article read on the forming of the first Institute. Each member is giving 25¢ towards the expense of the prov. delegate to the A.C.W.W. conference this coming fall. Lemesurier also read the story of the founding of that first W.I. A paper on "Laws for Women in Quebec" and a cussion on School Lunches featured the programme.

Papineau: Lochaber welcomed a new member. The programme for the next year was drawn up and an instructive paper given by the convenor of Agriculture, "Rural Women in Rural Affairs". A pleasing event was a surprise party given the county pres., Mrs. MacEachern and her husband, on the occasion of their 30th wedding anniversary. They were presented with beautiful gifts of china and crystal.

Pontiac: Bristol Busy Bees heard a paper entitled, "Which are the better on School Boards, Men or Women?" Apple recipe books were distributed and \$20 voted toward snow removal from roads. Clarendon dealt

with radio and press articles on the 50th anniversary of the W.I. A paper on the early history of the township was also given. Two minutes silence was observed in memory of a faithful sec. treas. who had served for over 11 years. Elmside made a quilt for a family who had sustained loss by fire. A talk, "Stumbling Stones in W.I. Work" and a poem, "A Man's Opinion of the W.I." formed the programme. Fort Coulonge entertained the Co. Pres. Miss Pritchard, who gave a talk on Institute work. Dr. H. R. Rabb was also present and outlined the work of the County Health Unit. A display of souvenirs brought from Germany and India by member's sons was found most interesting. Shawville is co-operating with the local Home and School Ass'n. Articles of clothing have been made to use in the overseas parcels. A musical quiz was a highlight of the programme. Starks Corners held a successful box social in place of their regular meeting. Quyon also held a social evening which netted \$5 for the treasury. A spelling match with prizes provided a little fun. Wyman spent the afternoon completing a quilt donated by two members. Mrs. Smallman's letter was discussed and material given out to be made up into useful articles.

Rouville: Abbotsford enjoyed a talk by Mrs. R. Thomson on her experiences during her Gaspé trip last fall.

Richmond: Cleveland reports over \$27 talent money taken in. A contest on repeating the Collect was won by four members (These are getting to be quite popular) and another contest, "Who am I?" was also enjoyed. Dennison's Mills sends a brief report of parcels sent overseas. Gore held an apron contest and sale, also goods sold and a cushion raffled to raise funds for their share of the county project. Melbourne Ridge has made 5 quilts for the Red Cross. A social evening was held and \$15 realized from a White elephant sale. A donation of \$5 to Save the Children is noted. Richmond Hill held a shower for a new baby. Quilt blocks were handed in at the meeting and the Blue Cross fees were paid. Shipton realized \$17.80 from a food and rummage sale. A raffle was also held and the sum of \$92, their share of the county project, handed in.

Shefford: Granby Hill received two parcels of goods from local firms. These were auctioned off and a satisfactory profit made to aid the treasury. Two monologues given by a member proved most entertaining. South Roxton held a food sale to aid general funds. A committee was appointed to prepare next year's programme. Warden held a busy meeting when routine business was discussed. Committees were formed in readiness for the annual meeting.

Sherbrooke: Ascot donated \$5 to the Blind Campaign and \$3 to St. John's Ambulance Fund. Plans were made to cater for a banquet for servicemen and a shower was given a war bride. Brompton Road also reports dona-



Mrs. R. N. MacLachlan (centre), president of Lochaber W.I., with two past presidents, Mrs. J. T. Nesbitt (left) and Mrs. D. McBain (right).

tions of \$5 each to St. John's Ambulance, Blind Campaign and Save the Children. \$4 was voted for the school hot lunches. The president was asked to contact the co. pres. to see if anything could be done in protest against broadcasting murder stories. Cherry River. A gift for a new baby and an apron parade and sale were features of this report. An article from the College Journal was read and another entitled, "Recordings". Lennoxville joined Ascot in catering to the banquet. Miss Empey, head of the V.O.N. in Sherbrooke and Mr. Hartley of the St. John's Ambulance Ass'n. were guest speakers and gave splendid addresses on their respective work. \$5 was voted to the latter fund and an equal amount to the Blind Campaign. The W.I. room is being used for a kindergarten class which is conducted by a veteran's wife. Milby held a sale of holders and towels and sponsored a social evening to raise funds. \$10 was donated the Blind Campaign. Orford holds a small raffle every month to raise money for the postage on their overseas parcel.

Stanstead: Beebe packed a parcel of clothing for Save the Children and two individual parcels for two Estonian children. The members enjoyed a fine talk on "Swimming" by Mrs. Ann Aldrich and a musical programme. Dixville is making plans for inoculations against diphtheria and whooping cough to be given to the children. A shower was held for a prospective mother. Hatley made plans for a card party and gifts of \$10 to each of the two Sunday Schools were acknowledged. An article, "The Watch on the Arctic" by Blair Fraser, was read. North Hatley has the honour of being asked to prepare the exhibit from Quebec province for the A.C.W.W. convention being held this Sept. in Amsterdam. Lady Marler was guest speaker and told of the work of the "Save the Children" organization. A donation of \$10 was made to that fund. A health quiz was enjoyed and a presentation made to an English bride.

W.I. — ON THE AIR

A new venture in publicity for the Women's Institute was launched when a 15 minute broadcast was given by Mrs. W. T. Pearson, president of the Sherbrooke Co. W.I., over radio station CKTS in Sherbrooke.

These broadcasts will be given the third Thursday of every month over this same station at 11.45 a.m. The committee in charge is composed of the presidents of the four counties—Sherbrooke, Compton, Richmond and Stanstead—and plans are being made to devote this time to general talks on the work of the Institute. News items from the various branches in this district will also be given.

Montcalm County

The county of Montcalm, once called Leinster, is situated in the foothills of the Laurentians. The principal village, Rawdon, was named after Lord Rawdon, an outstanding soldier of the American war. The township of Rawdon was surveyed in 1798 and the first settlers came the following year. These were English, Scotch, Irish, and some Loyalists. Many of these settlers had been army men and a company of volunteers was stationed here until after the Fenian Raids.



Lake near Rawdon Village.

Nature has endowed the district with lakes and rivers, wonderful pine and maple trees and many other varieties. The waterfalls are quite unique, four out of seven of them being in the village of Rawdon which takes in two square miles. Dorwin Falls is beautiful and in the older days it was an interesting sight to see the drivers letting the logs go through down the river. Trucks now do most of the work, not the rivers. Electric power is generated at Magnan Falls. Manchester and Mason Falls are also beauty spots with many lovely walks and drives.

Lumbering and dairying are the main industries of this county and of late years it has been part of the Laurentian play ground in winter as well as summer.

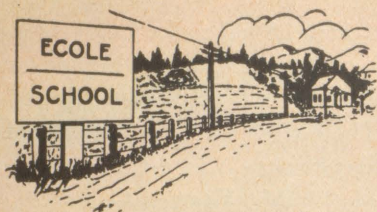
There is a large and active branch of the Women's Institute at Rawdon, founded in 1934. Public Health has been a major activity and work in the schools. Handicraft exhibits are also held and much Red Cross work was done during the war and carried through to the present time.

Speed Beats Flea Beetle

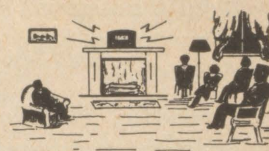
The faster potatoes grew, the less flea beetle injury they showed and the greater was the yield in Pennsylvania tests. Also, the higher a plant grew the greater was its leaf-hopper population.

Snapdragon Is Streamlined

The snapdragon is now responding to the work of plant breeders. A new hybrid has large, fringed flowers and good branching. But it is not yet on the market here.



LIVING AND LEARNING



Farm Forums in the Fifth Series

by Jos. Galway

Gathering news material on the last series of the season is a bit like the last few weeks of harvesting. The farm forum crop has been good this year, good in every respect,—interest, attendance and action. As I write this, the 1947 Questionnaires are rolling in to the office. Each contains a full report of a Forum's activities during the season and innumerable suggestions on how to improve the service and the program. Maybe it was these that made me think of harvest.

One of the surprising things about this series is the way attendance has been maintained. As a rule the number of meetings held drops rather sharply in the spring, mostly due to sugaring activities. Strangely enough we almost established a new record on March 17th. Forums in Quebec have certainly finished the season in a healthy condition.

Spring weather seems to have the tendency of making

everyone want to clean and repair or make improvements of one kind or another. What the Forums are Doing and Asking is evidence that this spring is no exception. Because of a shortage of space only a few examples have been quoted. Incidentally, Forums in Quebec have been engaged in over forty different types of action projects this year.

Plans for the County Forum Spring Rallies have been made and we expect to have interesting speakers for each one. Most of the field work will be done during the last weeks of April or the first of May and the Rallies take place at that time.

The Annual Meeting of the Quebec Council of Farm Forums will take place on June 21st. at Macdonald College. Several Forums or groups of Forums have already made arrangements for a bus load load of people to attend. Last year a load came from Lachute by a chartered bus, and they found it convenient and economical.

What Farm Forums Are Saying

Aubrey's Corners, Huntingdon Co. "Farmers should know prices at least a year in advance, but the longer the better." *Mr. Fred J. Armstrong, Sec.*

Jerusalem-Bethany, Argenteuil Co. "If we had a record of cost of production we could then establish prices sufficiently far in advance." *Mrs. Ernest McOuat, Sec.*

Hill Foot, Argenteuil Co. "Why should there be a surplus when so many countries are so short of food? A surplus of milk can always be made into butter or cheese, other surpluses can be used for food contracts with other countries." *Mr. Keith Pollock, Sec.*

Upper Tullochgorum, Chateaugay Co. "Our group thought that farm organizations should support labor unions in their struggle for satisfactory wages providing we farmers have some assurance of support of organized labor, for satisfactory prices for farm produce." *Mr. Huntley Greig, Sec.*

River Outarde, Chateaugay Co. "A union should give the farmer an assurance of stable prices for a definite length of time." *Mrs. Clifford Cowan, Sec.*

Third Range of Orford, Sherbrooke Co. "It is impos-

sible for farmers to hire help and compete with manufacturers until prices are stabilized."

Mrs. G. McElrea, Eec.

Brigham, Brome Co. "A hired man should not have to live in the same house as his employer, should have regular hours, a chance for recreation after his day's work if he desires it, and he should come under the unemployment insurance and workmen's compensation acts." *Mrs. C. F. Thomas, Sec.*

Stark's Corners, Pontiac Co. "It all depends on the man. He is entitled to as good as his employer if he is a dependable man and interested in the work. Factory workers are under constant supervision while farm help (on a small farm at least) is working a lot of the time on his own." *Mrs. Cecil Sly, Sec.*

Rougemont Station, Rouville Co. "We do feel farm workers should have an organization of their own, preferably a part of the C.F.A. This would lead to more security for both employer and employees, with better working conditions and stable wages." *Mr. J. K. MacArthur, Sec.*

Ways Mills, Stanstead Co. "Our difficulty is not to find year round employment, but year round employees." *Mr. Gordon Geddes, Sec.*

Amy Corner, Stanstead Co. "Most of the farmers in this district sell their cream. We are interested in acquiring information in hope of organizing a Cream Producers Association." *Mr. J. R. Taylor, Sec.*

Austin, Pontiac Co. "Our Forum thinks that the project of painting our mail boxes and having our names on them is a splendid idea. We also add that a sign erected at our gates bearing the name of each farm owner and giving his farm a name is a good idea." *Mrs. J. R. E. Garland, Sec.*

Bulwer, Compton Co. "Our Forum is extremely interested in organizing a condensed milk producers association." *Miss Phyllis Wheeler, Sec.*

Brigham, Brome Co. "An Action project to improve the recreation centre of the community is being undertaken." *Mrs. C. F. Thomas, Sec.*

Suffield and Belvidere, Sherbrooke Co. "As a project the members of our Farm Forum group have decided to paint and straighten up the mail boxes in the neighbourhood. The members have purchased some warble powder to put on their cattle to get rid of warble flies." *Mr. Warren C. Parker, Sec.*

Island Brook, Compton Co. "For an action project steps are being taken this spring to have soil tests made through the neighbourhood." *Mr. Hollis V. Burns, Sec.*

Herdman, Huntingdon Co. "We had a report from our representatives to the School Board meeting regarding annexation. We are continuing correspondence with the Department of Education and interviewing members of the Huntingdon School Board." *Mrs. John M. Wallace, Sec.*

What Farm Forums are Asking

Arundel I, Argenteuil Co. "Will you ask John McCaig to let us have information on forming a Calf Club? We know our Farmers' Club would help in this, also we could try and have the competition at the same time as our school fair." *Mr. H. F. Ronalds, Sec.*

ANSWER: "I am very pleased to enclose information on a Calf Club which you Farmers have asked for. To give you a clear idea of the rules I have enclosed our Boys and Girls Club Policy.

"I understand there are some beef cattle in this district. You can form a mixed club if you wish, part beef and part dairy.

"I am writing a letter also to your Agronome asking him to make a demand for a club in your district after which we will come and organize it."

John D. McCaig, Livestock Fieldman.

Rural Electrification

Willow Brook, Brome Co. "We would like to know if Quebec Hydro has a program for installing electricity in rural districts."

Mr. Wilfred Moffatt, Sec.

ANSWER: The following is a digest of a letter from the Office of Rural Electrification, Quebec.

"La Régie Provinciale de l'Electricité", 132 St. Jacques St. W, Montreal, supervises and fixes the rates for all power companies in Quebec. A power line construction permit is never issued to a company without permission from this office.

"If a private company agrees to provide electric power to every farm in a district, we suggest that the com-

pany be allowed to build the line. However, if the company refuses, we help the electricity co-operatives to build their lines.

"Our purpose is to see that electric power is available to all rural people and that discriminating methods are not practised by power companies."

Veterinary Service

Mansonville, Brome Co. "Our nearest vet is 28 miles away and we are not always able to secure him from here. Would it be possible to have the Government man from Sutton arrange to spend certain days visitings farms here?"

Mr. W. J. Young, Sec.

ANSWER: "We have no way of knowing whether or not the services of a government man can be made available to your district, but we suggest that you contact Dr. J. M. Veilleux, Chief of Health of Animals Services, Department of Agriculture, Quebec. As Quebec has given considerable aid to certain districts it is just possible that something can be done to help the present situation."

W. E. Swales, Chairman

Apple Spray

Hatley II, Stanstead Co.: "Is there a chart available for the spraying of apple trees; when and what types of spray?"

Mrs. Wallace Alexander, Sec.

ANSWER: "Although a chart has not been issued for 1947 yet, I am enclosing an old one and shall write to Quebec to have one for this year. The recommendation in general, I expect, will be the same as on the enclosed chart."

Donald J. MacMillan, Agronome



DEPARTMENT OF AGRICULTURE

*Activities, Plans and Policies of the Quebec
Department of Agriculture*

Hog Production in Quebec for 1947

From a radio talk by X. N. Rodrigue

Any farming enterprise offers a variety of sources of revenue. Some types of farming are more profitable than others, but in general today, livestock raising is the most valuable. Hog raising has developed rapidly of late years and now holds a place of importance in our farm economy. At the present time, hog raising is probably the most profitable of all livestock operations provided the hogs are of the true bacon type for which the demand is strong.

The intensive efforts which Quebec farmers have made during the war years have placed us in a position to continue to raise hogs profitably, and to make hog raising one of our most important sources of revenue. We raised more than 1,600,000 hogs in Quebec during 1946, the majority of which were sold on local markets, while the balance went toward maintaining of our export contracts with Britain.

The value of these hogs was more than \$50,000,000 and this contributed in no small measure to our general farm prosperity; hog raising has become an indispensable success factor in the operation of the majority of our farms, for two chief reasons. (a) Hog raising pays well, and will pay even better next fall and during 1948, when bacon for export will bring \$2.00 more than it does now. This increase will in turn mean a higher price to producers.

(b) Farmers who have gone into hog production on a large scale will find it difficult to go back to another form of farming without completely reorganizing their operations, and it is possible that they will not have the assured market for these other products that they now have for hogs.

It is evident, therefore, that we should keep on raising hogs and more hogs, using every method at our command to ensure successful operations. Some of these methods are worth mentioning. First, use only those breeds which are good bacon types, which mature quickly and are easy to raise and fatten. Many of our farmers could profit by following this recommendation. Secondly, plan to have two litters a year at least, so that hogs will be ready for market right through the year, but especially during the summer months. Third, try to grow as much of their feed grain on your own farms as possible.

This last recommendation is particularly important.

As has been pointed out before, there is no assurance that Western feed grain will be available to us next fall. This is what Minister of Agriculture Gardiner said at a meeting of Ontario milk producers last December: "During the past few years, the production of feed grain has decreased in Eastern Canada in comparison with the period just before the war, while production increased in the West. Now that western farmers are planning to increase their wheat production, it is urged that wheat be no longer used for livestock feeding, so that more of it will be available for human consumption. Therefore, it is up to the farmers in the East to grow more feed grain themselves, if they want to keep their livestock production at a high level." It seems clear that we must not count too heavily on being able to depend on our Western neighbours for the feed we in the East will need for our hogs.

And here is a statement which appeared recently in "The Agricultural Situation in Canada" concerning world wheat supplies; "Demands far exceed supplies available, and, unless those countries that have surplus supplies increase their exports to the countries that are short, the food situation in the latter countries can well become as serious as it was in the spring of 1946. These countries (much more heavily populated than Canada) are using their own supplies very rapidly and only large and regular shipments from more fortunate countries can prevent widespread famines."

However, it is said that supplies of feed grains, such as oats, barley and low-quality wheat, will be sufficient, if they can be brought east soon enough. But there is a shortage of freight cars, for these have been taken over to transport wheat for export toward the Pacific or to the Great Lakes. Also, there is no use waiting for the opening of navigation for, here again, shipping will all be taken up with wheat for export.

More Grain on Every Farm

I want to emphasize what has already been said in others of these articles on production in 1947. We will not be disasterously short of feed for our hogs if every farmer will make it his business to sow anywhere from three to five more acres than usual in mixed grain, so that he will have this feed for his hogs next fall. Once

we get this extra production started, it will probably be easy to continue in the same lines, and in time we may be able to get away from our dependence on Western feed.

And another advantage of growing our own feed will be to stabilize our hog production. Hogs will always be important here, favoured as we are with the best local markets in the Dominion, and ideally situated for exporting. We must not lose sight of the fact, however, that the present situation in the world will not last forever, and it is most important that we should establish a firm position for ourselves on the English market, the only one to which we can sell our pork products.

I am not trying to say that we should not buy any hog feed from outside. We all know that farm grains must be supplemented by other feeds — fish meal, skim milk, and other animal by-products. We have almost a million dairy cows in this province and dairy by-products are abundant. We should make the best possible use of them, so that we can feed the greatest possible number of hogs. There is much talk about "priorities" these days. Well, at certain times, when supplies of skim milk and butter-milk are low, young pigs should have priority on these items. Using these foods, or a commercial protein sup-

plement, we can cut down on the amount of mill feeds needed to produce 100 pounds of pork.

Another way of cutting down on the amount of concentrates is to make regular use of green feed for brood sows and young pigs. To some extent clover and alfalfa supply the protein lacking in grain feeds, and are easily digested; they contribute also to general health of the pigs. If clover and alfalfa are not available, peas, oats or vetches, fed green, will serve. Legume hay is useful during the winter. But it must be remembered that these are only supplements to be fed along with the concentrates.

Remember that our contract with Britain has been amended, and that the price for export bacon has been increased from \$25.00 to \$27.00 with effect from the thirteenth of last January. The average price for B-1 hogs on the Montreal market in February was \$21.90, not including premiums. It will certainly be higher after the first of September, when another increase of \$2.00 in the export price will go into effect.

The farsighted farmer who has sown some extra barley, and some extra mixed grain this summer will not be caught short when the time comes to give his hogs that last bit of finish before he sends them to market.

Some Suggestions From the Quebec Seed Board

There are three different classes of seed that may be obtained on the market. These are registered seed, certified seed, and general seeds of commerce. These differ in several important respects.

Registered seed is the highest quality that can be obtained. It must trace to pedigreed stock of a variety that has been thoroughly tried and found to be superior. It must have a high standard of freedom from seed of other varieties, other crops, and weeds.

Certified seed may have been produced from varieties that are not eligible for registration, or from registrable varieties if the stocks are not pure enough to be registered. The standard of purity as regards other varieties, other crops, and weeds is lower than is required, as a rule, for registration. In some crops seed is certified on the basis of freedom from noxious and other weeds alone. In all cases it is reasonably free from weeds and has a reasonably high germination.

General seeds of commerce are intended to include the ordinary seed that is sold through the trade. It is required to be relatively free from weeds, especially noxious weeds, and to have a fair germination. There is no definite assurance that it is genuine, or pure as to variety.

Red Clover

Lack of hardiness in red clover has often been responsible for severe losses from winter-killing of this crop

in Quebec. The use of home-grown seed in place of imported seed tends to reduce losses from winter-killing, but there is need for greater hardiness.

Varieties may be of the early or of the late type. Those of the early type furnish two cuts of hay or a crop of hay and a crop of seed in the same season. Those of the late type may give heavier yields at the first cutting but the aftermath is not so large.

Seed Corn

Open pollinated varieties are the ones that have been most commonly grown in the past. Seed of any one of



Use registered or certified seed to get crops like this.

these varieties is grown by simply planting a block in a suitably isolated field and allowing natural pollination to proceed without any other control. Anyone can reproduce such varieties from generation to generation by simply selecting good seed ears.

Hybrid corn implies crossing two or more strains or varieties in accordance with a previously tested scheme. Crossing different types usually results in a distinct increase in vigor and in most cases the hybrid matures earlier than the average of the parents. Owing to the expense involved in producing the seed, hybrid corn costs more per bushel.

As presently sold, however, the grading and germination are very superior and on account of this, as well as the character of growth, not more than 12 pounds per acre should be used. No attempt must be made to save seed of hybrids for a second year's planting, as the type will break up and give a most unsatisfactory crop.

There are two types of hybrids: varietal hybrids, which are merely the result of crossing together two open-pollinated varieties, and double-cross hybrids, which are of a much more complex nature. The strains entering the cross have been inbred and selected for many generations, with emphasis placed on strength of stalk, disease resistance and yield. The added strength of these sorts makes them better able to withstand the effects of the attacks of the corn borer.

Rust of Oats

The oat crop is sometimes attacked by rust, of which there are two types — leaf rust and stem rust. One or other or both of these may cause damage in some years, while in other years little or no damage may be done. In some areas, too, the oat crop is affected by one or the other almost every year.

Where rust occurs, if conditions are favourable it spreads rapidly as the season advances. For this reason, the early varieties, even though not resistant, often escape, unless they are planted late. In an area in which rust commonly causes damage, a variety should be chosen which is resistant to the type of rust that is troublesome.

Brown Heart of Swedes

In growing swedes it has been found that boron helps very greatly in controlling the Brown Heart disease. Boron is usually applied as sodium borate, or "borax". The rate of application depends on the acidity of the soil: 25 pounds is required on acid soils and at least 35 pounds on neutral or nearly neutral soils. In no case, however, should more than 50 pounds be applied to an acre.

It is important to spread the material uniformly and to have it well worked into the soil. On account of the relatively small quantities to be applied, this is somewhat difficult to do. One of the best ways of doing it is

to mix the borax thoroughly with sand or with the fertilizers which are being applied to the swedes. The application should be made to the soil and harrowed in thoroughly several days before seeding the crop. Boron



Boron helps to produce good stands of swedes.

is very toxic to seed and seedlings, and should not be applied along with the seed.

Inoculation of Alfalfa Seed

It is recommended that alfalfa seed be inoculated before it is sown. Special consideration should be given to inoculation where alfalfa is seeded alone or where it makes up a large part of the seed mixture.

The cultures used for inoculation are sold by the large seed firms under such trade names as "Nitragin" and "Legume Aid" and directions come with the material. When ordering a culture it is necessary to state the amount of alfalfa seed which is to be inoculated. The culture should be applied just before the seed is sown.

Ormstown Fair Directors Plan for 50,000

"Where better meets the best in livestock" will be the slogan for the 1947 edition of the Ormstown Fair which will be held from June 4th to 7th. From present indications every previous record will be broken, and it appears that during fair week Ormstown will have the unique distinction of having an attendance at the exhibition of over fifty times the population of the town.

The show grounds and the arena have been improved, prize money has been increased, plans for extra accommodation and particularly for better meal service have been made, and nothing is being left undone to make this year's fair the biggest and best ever.

Thomas E. Dewey, Governor of New York State will be invited to open the Fair and it is hoped that he will find it possible to attend.

With The Quebec Livestock Breeders

Accident insurance for hired men and the state of our agricultural fairs highlighted the discussions at the fifty-second annual meeting of the Quebec Society of Pure-bred Livestock Breeders, held in Montreal on March 13 and 14.

For some time the executive of the society has been studying the possibility of obtaining for the members some form of insurance which would protect them in the case of suit by a hired man following an accident sustained during his regular work. A proposal was presented to the meeting which was discussed at some length, though no definite action was taken, the whole matter being turned back to the executive once again. It was emphasized that the special rates offered could apply only if at least 500 farmers applied for policies, though this is not a group insurance scheme.

A committee of the society, headed by X. N. Rodrigue, has been working for some time on the question of our agricultural fairs, analysing their value and seeking ways by which they may be improved, and presented its report to the meeting. Little fault was found with the Provincial Exhibition which, the committee felt, is serving its prime purpose as a show window where breeders, growers and manufacturers can display their wares, and where the Government Departments, both Provincial and Federal, can bring their messages to a large number of people.

The regional fairs, it was thought, are not making the most of their opportunities. Too much attention is given to amusement and not enough to education — the displays take second place to the attractions of the midway. It was suggested that some sort of eliminations should be held before the regional exhibitions, and it was also thought that more regional fairs could have provincial sections.

County fairs are useful, if well organized and operated, but it was suggested that many of the poorer ones could well be done away with without loss and more attention given to the larger and better ones.

Considerable discussion, evidently unexpected, came from the floor after the report had been given, over the question of establishing an exhibition in Montreal. Backers of the proposal were convinced that such an exhibition would be well worth while, but just as many members were equally convinced that a Montreal exhibition would not be worth the effort and expense and the general feeling of the meeting seemed to be that it would be better to concentrate on improving what we have rather than trying to start something new at present.

It was generally agreed, however, that a Provincial

Winter Fair should be organized at Three Rivers, and a resolution to that effect was adopted. Some changes in classes and sections were also debated, and it was resolved to bring to the attention of fair executives the advisability of having the top classes judged at times when most spectators were at the ringside.

Other resolutions were adopted later in the meeting. The Federal Government was urged to continue the ban on the manufacture and sale of oleomargarine, to appoint a bilingual grader to assist in classification of stallions, to increase the price of both butter and cheese and to retain the bonus of 10 cents per pound on butter-fat for another year after May 1st. It was urged that everything possible be done to ensure delivery of feed grain from the West, since otherwise it would be doubtful if livestock production could be kept up to the necessary level.

The establishment of artificial insemination centres was asked, and it was also requested that short courses in livestock breeding be arranged for farmers' sons. It was also asked that a ruling be passed which would prevent any animals from non-accredited herds from being sold at public sales.

The chief of the Quebec Animal Husbandry Service, Pierre Labrecque, was guest speaker at the closing luncheon, and brought the regrets of Minister of Agriculture Barre, who was unable to attend. J. M. Seignac brought greetings from the City of Montreal in the unavoidable absence of Mayor Houde, who had been invited to attend.

The newly elected executive consists of the presidents of the eleven affiliated societies. President for the coming year will be Az. Lavalle; vice-presidents are Alex. Fournier and Jos. Hebert. Directors are the Hon. Antonio Elie, Ernest Sylvestre, N. G. Bennett, J. J. Joubert, F. S. Desmarais, J. P. Beauchemin, A. J. Jargaille and J. E. Trepanier. Mr. R. P. Sabourin continues as secretary.

Making Money from Sugar Beets

At least eight farmers made an income of over \$1000 from sugar beets alone in 1946, according to figures recently released from the refinery. None had planted more than 9 acres nor less than 5 acres to beets and the total yield varied from 84 tons to 118 tons of roots.

Seventy-three farmers made between \$500 and \$1000 during the year, on anywhere from 3 to 9 acres of beets. One man with only 3 acres planted to this crop got a production of 26.75 tons per acre which brought his revenue from this crop to \$321 per acre.

Recommendations of the Provincial Fertilizer Board for 1947

Unless something unforeseen happens, farmers will be able to obtain the general purpose fertilizer mixtures this year, i.e., 0-13-7, 3-18-0, 2-12-6, 2-16-6, 2-12-10, 4-12-6 and 4-8-10. Formulae recommended for tobacco are the 5-8-7 and 2-10-8, but the sale of 3-10-8 is also authorized, although this is not generally recommended for yellow tobacco. A 2-8-16 formula will likely be on the market; this is recommended for use on muck soils.

Ammonium nitrate should be used in preference to nitrate of soda, as the former is soluble and is cheaper per unit of nitrogen.

ANALYSIS RECOMMENDED FOR RATE PER ARPENT SUPERPHOSPHATE 20%

(For general use on heavy soils and to equilibrate the fertilizing value of farm manure.)

0-14-7	Cereals on clay soils	200 to 500 lbs.
	Silage corn, Swedes and Mangels, with manure	400 lbs.
	1st and 2nd year meadows	300 lbs.
	Pastures where wild white clover is present	400 to 600 lbs.
	CEREALS on loam soils where lodging is likely to occur	200 to 500 lbs.
	PASTURES on loam soils, specially as fall applications	400 to 600 lbs.
	ALFALFA MEADOWS on loam soils	200 to 300 lbs.
	CEREALS on light soils well supplied with nitrogen	200 to 500 lbs.
	PASTURES on light soils, specially as fall applications	400 to 600 lbs.
	ALFALFA MEADOWS on light soils	200 to 300 lbs.
2-16-6 2-12-6 or 3-18-0	FIBRE FLAX where lodging is usual	300 to 500 lbs.
	CEREALS on loam soils	200 to 500 lbs.
	EARLY SWEET CORN on heavy soils with manure	600 lbs.
	SILAGE CORN, SWEDES and MANGELS, on loam and clay soils	375 to 500 lbs.
	PASTURES on heavy soils where wild clover is absent	400 to 500 lbs.
	PERMANENT GRASS MEADOWS on loam and heavy soils	200 to 300 lbs.
	POTATOES on heavy soil after a crop of clover being worked into the soil	650 to 1000 lbs.
	TABLE STOCK SWEDES on heavy soils	375 to 500 lbs.
	TOMATOES on heavy soils	250 to 400 lbs.
	PEAS and STRING BEANS no manure	500 to 600 lbs.
2-12-10	SAME CROPS on light soils as 2-12-6 on loam and clay soils and used in same quantities	
	ONIONS on mineral soils, with manure	500 to 800 lbs.
	ONIONS without manure	800 to 1200 lbs.
	FIBRE FLAX production (general recommendation)	300 to 500 lbs.
	SUGAR BEETS on light soils, broadcast	200 to 500 lbs.
	SUGAR BEETS on light soils, in bands if fertilizers placed in contact with the seed	200 lbs.
	CARROTS and BEETS	125 lbs.
	PICKLING CUCUMBERS	600 to 800 lbs.
	CUCUMBERS and MELONS in frames	800 to 1000 lbs.
	CUCUMBERS	2 to 3 lbs. for each
4-12-6	CEREALS on poor soils, specially low in nitrogen	6'x12' frame 200 to 500 lbs.
	PERMANENT DEPLETED GRASS	
	PASTURES	400 to 600 lbs.
	OLD GRASS MEADOWS	200 to 300 lbs.
	CORN, SWEDES and MANGELS, on very poor soils	375 to 500 lbs.

4-8-10	POTATOES on old muck soils	800 to 1200 lbs.
	EARLY POTATOES with no manure	800 to 1200 lbs.
	LATE POTATOES where no manure is available and no clover has pre-ceedingly been worked into soil	800 to 1500 lbs.
	EARLY CABBAGES and CAULIFLOWERS	800 to 1200 lbs.
	LATE CABBAGES and CAULIFLOWERS	500 lbs.
	ASPARAGUS	1000 lbs.
	EARLY SWEET CORN without manure	600 to 800 lbs.
	LEeks on mineral soils	500 to 800 lbs.
	CORN SILAGE, SWEDES and MANGELS on very poor soils where no manure is available	400 to 700 lbs.
	FIBRE FLAX on soils very low in organic matter. (Special recommendation for lower St. Lawrence dist.) without manure	300 to 400 lbs.
2-8-16	FIBRE FLAX with a thin coat of well rotted manure	250 lbs.
	STRAWBERRIES — after harvest	250 lbs.
	RASPBERRIES — when no manure is available	500 to 600 lbs.
	MUCK SOIL CROPS:	
	CARROTS, BEETS, PARSNIPS	500 to 800 lbs.
	ONIONS, CABBAGE, CAULIFLOWER, LETTUCE	800 to 1200 lbs.
	LEeks, POTATOES	800 to 1500 lbs.
	CELERY—immediate market use	800 to 1200 lbs.
	CELERY—keeping celery	1600 lbs. up
	SUGAR BEETS on loam and clay soils: applied broadcast	300 to 500 lbs.
2-16-6	in band application	250 lbs.
	if fertilizer placed in contact with the seed	150 lbs.
	5-8-7 PIPE and CIGAR TOBACCO	500 to 1200 lbs.
	2-10-8 CIGARETTE TOBACCO	800 to 1000 lbs.

N.B.—The rate of fertilization recommended above are "per arpent." When the acre is the unit, the above quantities must be increased by one-quarter. For example, 800 lbs. per arpent equals 1000 pounds per acre.

For more information please address correspondence to Mr. Roland Lespérance, Secretary of the Provincial Fertilizer Board, Department of Agriculture, Quebec.

Recommendations for Orchards

Special fertilizer recommendations were made for the 1946 season, following the very abnormal conditions which existed in our orchards in 1945. It is thought advisable now to revert to fertilizer recommendations designed to maintain adequate soil fertility under normal conditions.

For old orchards where trees cover almost all the ground, a broadcast application over the entire area of 9-5-7 at the rate of 700 to 900 pounds per acre is recommended.

For orchards where there are relatively open spaces between the trees, an application around the trees of 1 to 1½ pounds of 9-5-7 per inch of tree diameter is recommended. In addition, it is recommended that a fertilizer such as a 4-8-10 or 4-12-6 for non-leguminous sods (or 2-12-6 or 2-12-10 for a legume sod) be broadcast between the rows of trees at the following rates, to stimulate grass growth to provide material for mulching: 300 pounds per acre if the spread of trees covers ¼ of

the area, 200 pounds if they cover $\frac{1}{2}$ the area, and 100 pounds if the open area is only 25%.

Although the above recommendation of 9-5-7 is of a general character, it is thought advisable to the greater majority of the orchards of B category. However, it is to be noted that the use of simple nitrogenous fertilizers at the foot of the trees would be more economical in the case of those very few orchards where, following heavy and numerous applications of mulch, the soil is already very rich in organic matter, phosphorous and potash. Applications might then be made of either $\frac{1}{3}$ to $\frac{1}{2}$ lb. of ammonium nitrate or $\frac{1}{2}$ to $\frac{3}{4}$ lb. of sulphate of ammonia per inch of trunk diameter. The first fertilizer value resides in its almost neutral reaction, great solubility and relative inexpensiveness (taking into account its high nitrogen content— $33\frac{1}{3}$) and the second, as an acidifying fertiliser, being especially proper for soils rich in lime.

These details are given for your information. In order to avoid any misunderstanding, we wish to emphasize that, as a rule, the orchard soils of the province of Quebec are so poor that the use of the 9-5-7 fertilizer is imperative, as a protection against unbalanced nutrition of the trees and the many serious troubles which would result for the apple grower.

Rates of Application of Fertilizers

Two rates of application have been indicated for 9-5-7. The lowest rates (700 lbs per acre and 1 lb. per inch. of trunk diameter of the trees) are suitable:

1. For the high lime soils of Oka, St-Joseph-du-Lac, Montreal Island, Chateauguay and St-Remi;
2. For the shallow soils in the eastern portion of the Hemmingford district;
3. For the districts of Quebec and lower St. Lawrence in account of their shorter growing season.

Time of Application of Fertilizers

It is very important that the nitrogenous fertilizers be applied in the spring, as soon as growth starts, say three weeks before flowering, to encourage fruit set and early growth.

Late applications of nitrogenous fertilizers will not only have very little effect upon fructification but will delay the hardening of the trees in the fall and increase the danger of serious damages through winter freezing. So much the more are fall applications of nitrogenous fertilizers strongly inadvisable.

Use of Borax

In order to control cork disorders borax should be applied to all orchards where cork has been found and where no application of borax has yet been made. An orchard need only be treated once every three years since a single treatment has been found effective for that period.

Foliage Spray — Borax may be added to regular spray mixtures at the rate of $2\frac{1}{2}$ pounds to 100 gallons. It is

recommended that it be added to two sprays, the calyx and the first cover spray. Or, in the district of Frelighsburg:

Soil Application — Four ounces of borax to trees up to ten years of age, eight ounces to trees from ten to twenty years of age and eight to sixteen ounces to older trees. To apply this small quantity, the borax may be mixed with several times its volume of dry sand or soil as an aid in spreading.

Control of Magnesium Deficiency

A deficiency of magnesium brings about typical internal yellowing or brown blotching of the foliage and premature defoliation. In severe cases heavy drop of the fruit also occurs or normal maturity is prevented and the fruit is small and dingy in appearance.

In the case where deficiency symptoms are severe and immediate control is desirable, add magnesium sulphate to the regular spray mixture at the rate of 20 pounds per 100 gallons of spray. This should be included in four sprays to obtain control in severe cases.

On highly acid soils such as occur in the Frelighsburg area it is recommended that land to be newly set out to orchard should be pre-treated with finely divided high grade dolomitic limestone to provide a slowly available long time supply of magnesium and prevent a deficiency of this element from arising.

New Appointment to Rural Economics Service

Mr. Octave Henuset, agronome, has been appointed to the post of regional instructor in co-operation in the Rural Economics Service. His headquarters will be in Montreal.

Mr. Henuset has been instructor in co-operation in the Eastern Townships for some years, working out of Sherbrooke. He has a wide knowledge of co-operatives and their organization and is an expert on co-operative accounting.

A.I.C. Offers Scholarships

Twenty scholarships valued at \$800 each will be awarded this year by the Agricultural Institute of Canada to enable highly qualified students to do postgraduate work during the 1947-48 university term. These awards are financed by business concerns who are interested in the agricultural industry.

Competition is open to university graduates in agriculture and to holders of other degrees provided the courses taken afford suitable preparation for postgraduate work leading to service in the field of agriculture. Applications are to be made to the Secretary, A.I.C. 1005 Confederation Building, Ottawa, and must be in by June 1, 1947. Awards will be based on academic attainment, experience, and the need for workers in any particular field.

Strippings

by Gordon W. Geddes

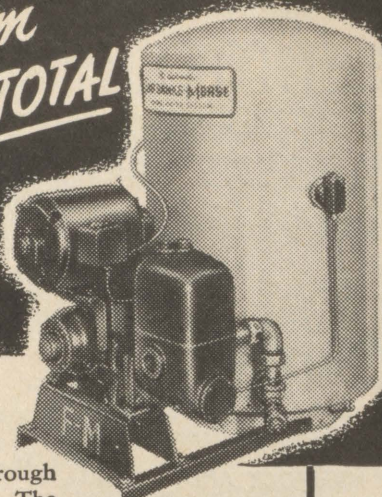
The man who could have harvested a good crop of clover and alfalfa seed last fall could certainly have made a 'killing' this spring. But of course few, if any, growers were able to do so or prices would not have jumped so. It could lead to a rather serious situation since so many farmers say they cannot afford to plant much clover at present levels. If this decision is put into practice it may mean reduced dairy production a year later. It is pretty hard to get milk without good hay. Timothy can be cut early enough to make good feed but it seldom is. If it is, the second cutting is not as strong as clover. Use made of the crop also affects the value of seed. A cow giving 400 to 500 lbs. of butterfat can pay more for clover seed than one giving only 250 lbs. But it is a question if anyone can afford not to plant clover. A small planting this year also leaves a smaller chance for seed production the following season. Coupled with poor conditions it might result in prohibitive prices.

Anyway the present rise will put the average cost of things the farmer has to buy up more than the three per cent mentioned by Mr. Taggart in his Forum broadcast. Farmers are having a little difficulty in swallowing the statement as it is. When questioned on it Mr. Taggart credited the Bureau of Statistics with furnishing the information. If so, the Bureau in turn must have obtained its facts from a 'usually unreliable source'. Or else figures don't lie but liars can figure. Even the Bureau admitted that the costs were up 26.5 points in August, 1946, over the average from 1935-39.

Anyway, whatever Mr. Taggart says about costs, we were glad to find enough clover and alfalfa mixture left on hand to reduce our seed bill this spring. The fertilizer we had left will also be handy in face of the 10 to 12% rise in price. In fact, everything we have had on hand has been a saving to date though sometime it will probably be disastrous to have as much on hand as we have had lately. For we certainly bought our share of the twenty million

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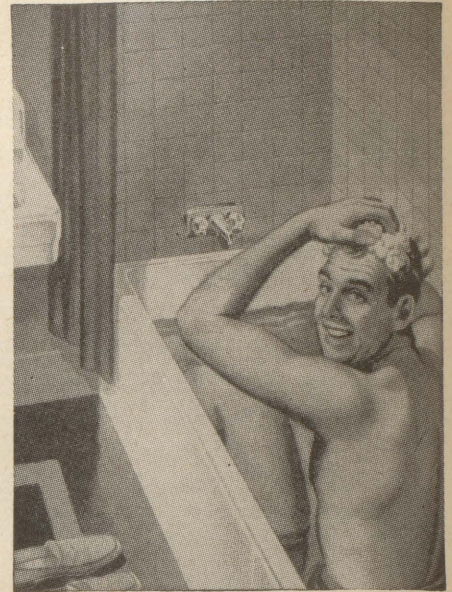


dollars worth of western feed grain which came to Quebec in 1946. The East and the West are always complaining of supporting each other but certainly Quebec was a good customer for the West last year. On the other hand Quebec was glad to get the grain and could have used more the way the shortages have shown up in the grain stores just lately. So probably both East and West would find it hard to get along without each other.

If the crows know their onions spring is going to be a bit late for they were later coming back in force in spite of the mild weather we had been having. It is now the middle of March and the sugar season is just commencing though some got started a few days ago. What the crop will be is hard to say. Certainly, we do not lack snow at the beginning for it is so deep it is very hard to get around. On the other hand the ground is not frozen if that has any bad effect. At least, a good market should be a sure thing with no coupons required.

Having fertilizer on hand was not an unmixed blessing for if it could have been used for the purpose for which it was purchased, we should have had more land in production this year. Failure of the bulldozer to do its work for us upset that plan but we are wondering if we can still do something else with the land in question. If we could get the bushes cut in time, perhaps a tractor and a breaker plow could do something with it. It would cost more than doing the work with a bulldozer but it is possible that it would waste less good soil. The brush is small enough so that the plow could remove the stumps while a bulldozer would push off a lot of top-soil with the brush. The kind with teeth to remove the brush and leave the dirt would be better but is not available here yet.

Some local farmers got the idea that buyers were giving more live weight for hogs here than could be obtained on the rail in Montreal. It didn't seem reasonable when they could be shipped



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in for 88c a head but we tried it. On two grade A's we got \$1.95 less at 16½c alive than we could have had at 22¼ in Montreal with shipping deducted. It was easy to check up because the hogs were graded in Montreal just the same and the weight on the rail was sent back. Buyers would not be apt to furnish capital to buy hogs for less than the 88c profit.

Plan Now For Wind-breaks

A windbreak can't be established overnight but this is the time to make plans for planting it this spring.

First item in the planning is to select a suitable site. In general the windbreak should be located on the north and west sides of the farmstead and should be at least 100 feet from the house. Likewise, locate the windbreak far enough from all main buildings to keep snow from drifting around them.

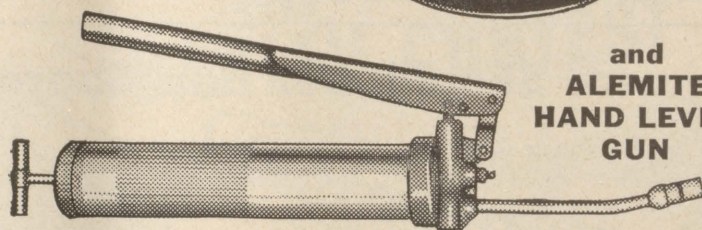
Studies indicate that a windbreak will give protection up to 20 times its height, with the most effective zone of protection at a distance of from six to eight times the height of the trees. Thus if a windbreak is 30 feet high, it should be located preferably from 180 to 240 feet from the main farm buildings.

Once the planting area has been selected, fence the area to exclude all livestock and poultry. The area should be large enough so a ten-foot strip can be left between the outer rows of trees and the fence.

If the area is not in sod, it should be plowed in the fall, if possible, followed by a good disking and harrowing in the spring. If the area is in sod, strip the sod off an area 3 to 4 feet across where each tree is to be planted. If the barnyard drains into the area, the flow should be diverted by ditching or making dikes.

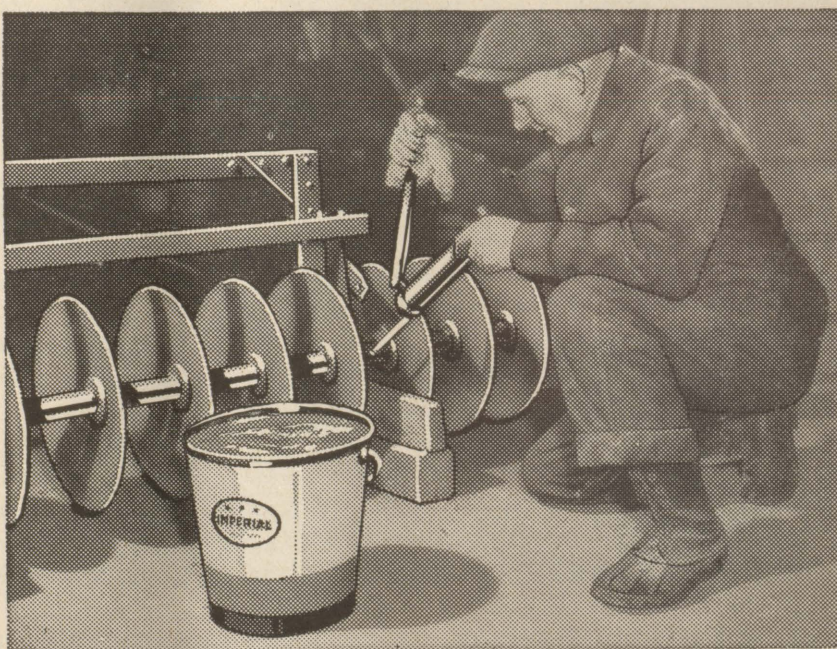
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Farmers Should Get Fair Share

"Do Canadian farmers dare to produce in abundance?" asked H. H. Hannam, president of the Canadian Federation of Agriculture. It was a rhetorical question directed to an audience that included many of Canada's most prominent manufacturers and businessmen, as well as farmers and professional agriculturists, at a meeting of the Montreal Branch of the Agricultural Institute of Canada.

Mr. Hannam answered his own question: "Only if farmers can be assured of their share of the returns."

Farmers believe in a policy of abundance, he said, and are ready to do their part to make this ideal a reality. But remembering the sad experiences of the past, they have grave fears that expanding production without due safeguards will bring only a repetition of past disasters. In a program of abundance the spectre of embarrassing surpluses is ever present.

Today, continued Mr. Hannam, the best minds in the world of food and agriculture are striving to evolve a suitable world food program. Basic in such a program is the fact that expanding food production, distribution and consumption must be organized and co-related and guided on a world basis. It follows logically that some

international agency must be set up to undertake these responsibilities.

The Canadian Delegation to the Food and Agriculture Organization of the United Nations has already proposed setting up a world food council, and this idea has taken hold of the minds of the people charged with the task of solving the world's food and agriculture problems.

Some of the methods being considered to achieve international stability, without which the establishment of a stable agriculture at home would not be possible, include:

1. Organizing and giving direction to agricultural production and food distribution on a world basis.
2. Establishing maximum and minimum prices on the world market—maximum prices to protect consumers in periods of scarcity, and maximum prices to protect farmers in times of surplus.
3. Long-term contracts, and international commodity agreements.
4. Buffer stocks, and disposal of surpluses on special terms when circumstances warrant.

The success of a world food program of this kind can mean greater abundance that has ever been known for the peoples of the world, said Mr.

CANADIAN FARM LOAN BOARD NOTICE

The appraisal season for valuing farms for loans from "THE CANADIAN FARM LOAN BOARD", has already started.

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Hannam. But it must be obvious that a world of plenty is not possible without stability for the primary producer who must be depended on to create that abundance, he concluded.

Mr. Hannam was introduced by Dean W. H. Brittain of Macdonald College, and thanked by F. Badke, president of the Montreal Corn Exchange. R. K. Bennett, chairman of the Montreal branch of the Agricultural Institute of Canada, was in the chair.

Keeping Your Crop Free From Disease

by Dean Robinson

Each year as sowing time comes around, farmers must decide whether to treat their seed grain for disease. The more successful ones usually have no trouble in making the decision. They know that their success has been due to taking all the gamble possible out of farming; and seed treatment is one form of crop insurance.

Smut is the chief seed-borne disease of cereals; and in areas where loose smut of wheat or barley causes loss the grower has no alternative but to use the hot water treatment recommended in government bulletins.

But losses from loose smut are of small consequence in comparison with those from all the other seed-borne diseases of grain. Parasites that lurk in the soil or in the hulls of apparently healthy seed play a very insidious role, the importance of which has not been recognized until quite recent years.

These parasites attack the germinating seed or the seedling. They may destroy the young plant altogether, perhaps before emergence; or else they weaken it so that the yield is lowered. In either event, the elimination of the parasites will pay dividends in stronger stands and higher yields.

Chemical treatment of seed grain will kill all seed-borne organisms except those causing loose smut of wheat and barley. In addition, it protects the seed against decay in the soil.

Various chemicals may be used for this purpose. Bluestone, copper carbonate and formalin were the chief ones recommended until the discovery of the protective efficiency of mercurial dusts. None of the old treatments can equal these mercury compounds in ease of application or effectiveness in disease control.

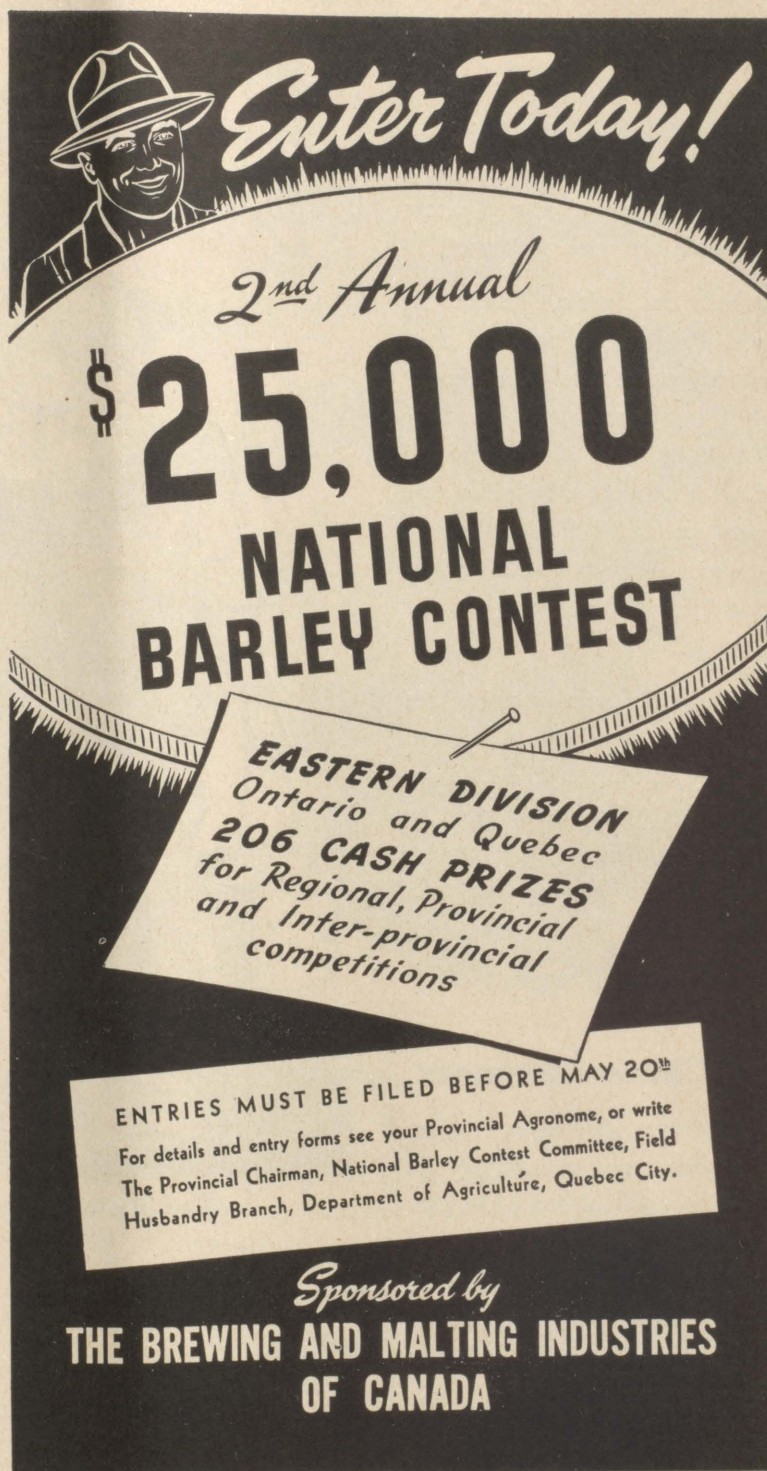
The best mercury dust for cereals is now sold under the name "New Improved Ceresan". If thoroughly

mixed with the seed a few days before sowing, Ceresan gives almost perfect seedling production when used at a rate of half an ounce per bushel.

Experiments at Macdonald College have shown that under dry conditions rates of Ceresan application as high as two ounces per bushel will not injure the seed over a storage period of more than six months. This means

that Ceresan treatment has the added advantage that it can be carried out at almost any convenient time before sowing—perhaps in conjunction with seed-cleaning operations.

The routine treatment of seed grain is an insurance policy for every farmer. The premiums, in cost of treatment, are very small and the resulting protection sure.



Enter Today!

2nd Annual

\$25,000

NATIONAL BARLEY CONTEST

EASTERN DIVISION
Ontario and Quebec
206 CASH PRIZES
for Regional, Provincial
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competitions

ENTRIES MUST BE FILED BEFORE MAY 20th
For details and entry forms see your Provincial Agronomist, or write
The Provincial Chairman, National Barley Contest Committee, Field
Husbandry Branch, Department of Agriculture, Quebec City.

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THE BREWING AND MALTING INDUSTRIES OF CANADA

Names Are Corrected

Apparently the Journal staff is very human, if fallibility is really an indication of humanity. In the last couple of numbers there have been two errors which the editors wish to correct.

In March the article "Pioneer in Maritime Progress" Page 10 was inadvertently credited to L. H. Hamilton, when it was actually written by Colin Chisholm. We want to make it clear that Mr. Hamilton bears no part of the responsibility for this error; and we also wish to apologize to Mr. Chisholm for failing to give him the proper by-line.

In the February number there was an error in the cut lines on Page 4. These identified J. A. Eccles' farm manager as Mr. Whitehead, when he is really George Harvey. Our apologies to both Mr. Harvey and Mr. Whitehead for this unintentional confusion.

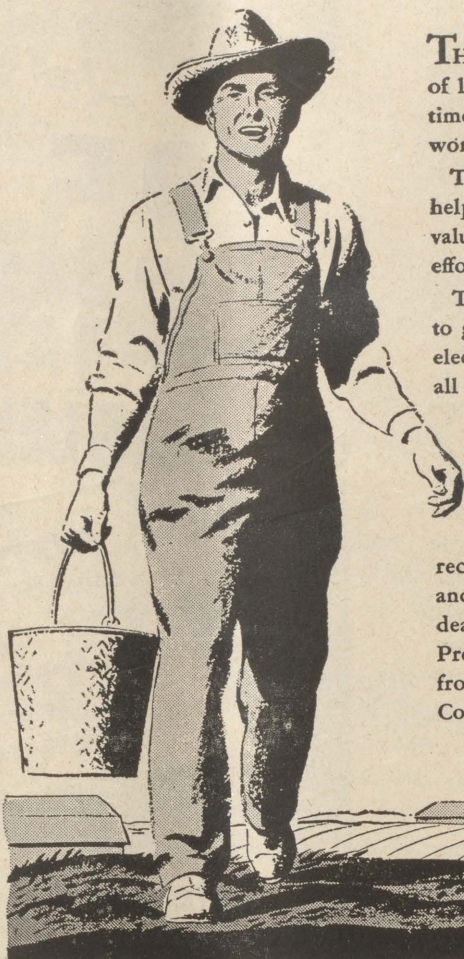
Ills of Cheese Business

The cheese business suffers in many districts because not enough of the old-time energy and skill are put into it, because there are too many low-producing cows and too much low-testing milk, because not enough crop and pasture are produced to maintain enough cows properly to make a successful unit, and because the milk itself is carelessly handled.

This opinion was expressed by no less an authority than the Deputy Minister of Agriculture for Canada, Dr. G. S. H. Barton, at the annual meeting of the Ontario Cheese Producers' Association in Toronto.

"The philosophy we need among farmers", continued Dr. Barton, "is

A FARMER KNOWS THE VALUE OF A DOLLAR



THE farmer knows how many strokes of labour a dollar represents. At bedtime his bones ache with the day's work that earned it.

These days, with the shortage of hired help, that dollar takes on increased value, for it represents even greater effort on the part of the farmer.

That is why it is sound common sense to get the very best out of all existing electrical helpers—to set in good order all electrical farm equipment and save time, labour and money.

In extending congratulations to the farmers of Quebec on what they have already achieved, The Shawinigan Water & Power Co. recommends full use of the repair and adjustment services of Shawinigan dealers and urges the farmers of this Province to get all there is to be had from the low cost electrical service the Company supplies.

The Shawinigan Water & Power Company

Electrical Power  Industrial Chemicals

ENGINEERING • TRANSPORTATION • CONSTRUCTION

that what any group of farmers can do in a given group of circumstances, other farmers in similar circumstances must be able to do, or be replaced by others who can and are willing to do it."

Want All Milk Pooled

Milk pooling has been suggested as a solution to price and seasonal supply problems, by the Ontario Cheese Producers' Association. The association

believes that under such a system fair prices could be insured all producers by setting differentials between the prices paid for milk suitable for different purposes.

It also contends that pooling would assure an adequate supply of whole milk for consumption in Ontario, without unduly affecting the supply for other purposes, and at the same time reduce the cost now incurred by whole milk producers in forcing production during periods of short supply.

THE COLLEGE PAGE



Life in the "Huts"

Many of our friends have shown great interest in the apartments we have built on the campus for our married veteran students. We have already published a cover picture showing what the huts look like from outside, and we now take you inside, to the home of a former squadron leader in the R.C.A.F. and his wife, to give you an idea of the accommodation these apartments provide.

Photo number one shows the location of the apartments, in relation to the rest of the College. The apparent curvature in this photo is due to the type of camera used to give a wide picture that would take everything in. The three rows of huts in the foreground are for married couples: the other two rows are being used at present by single students.

Picture number two shows our couple moving in just before classes started last fall. Their apartment is the first one on the left in the first row. The table that is being unloaded under the watchful eyes of the owners was built by the veteran in the Handicrafts shops; it appears again in picture seven.

As picture number three shows, the kitchen, though small, is roomy enough for a stove and shelves for provisions. The hot plate being used has since been replaced by an electric rangette. The shelves were not standard equipment but were installed by the tenant. In an alcove off the kitchen is the sink: hot running water is on tap at all hours. (See picture number four.)

In picture number five, we see the bedroom, being used also as a study room. The living room, a corner of which appears in photo number six, is large and comfortable. All these apartments are rented unfurnished, but all have been very tastefully and comfortably furnished by their tenants.

Veterans' study grants are not large and our married veterans, particularly those with families, find it no easy task to stretch the budget to cover all their needs. Nevertheless, on the evening that these photos were taken, this couple had just finished buying a stock of provisions to be sent to less fortunate friends overseas, and our photographer stayed around while they packed their box, as shown in picture number seven.

The affairs of this little community are presided over by a council which, with the mayor, are elected by the "citizens" and these officials, assisted by various sub-committees, iron out difficulties that are bound to arise. This experiment in housing has been an unqualified success, the best evidence of which is the fact that more applications for apartments for next session have been received than it will be possible to accept.

A GREATER YIELD

THROUGH MODERN PROTECTION

WITH FIELD LEADER PRODUCTS

Green Cross Insecticides... with a complete line of products for modern pest control... brings more good news to Canadian orchardists. Now, for the first time, micronized insecticides and fungicides are being manufactured in Canada.

Conclusive tests have shown that DDT, sulphur and other insecticides give more effective results when they have been reduced to smaller particle size. To provide this greater control over insects and disease, Green Cross has established a Micronizer* Reduction Mill at Arvida, Que.

Micronization, where necessary, will give these advantages to Green Cross products... increased tenacity, better coverage, and increased toxicity... three strong points paving the way for an increased yield in your orchard.

Green Cross*

INSECTICIDES

Fungicides - Herbicides

TO COMBAT DESTRUCTIVE INSECTS AND DISEASE...



Green Cross 50% Micronized* DDT Wettable Powder

DDT is fast spelling the end of the Codling Moth as a serious orchard pest. Recent use has shown almost total destruction of the worm in the fruit. It eliminates the moths, themselves... it is difficult to find apples with stings present where DDT has been used.

50% Micronized* Wettable DDT

Powder adds to the killing properties of DDT the advantages of small particle size... greater coverage, increased toxicity and tenacity.

It is economical. Fewer sprays are required. On apples, use 1½ to 2 pounds to 100 gallons of water. For other fruits and times of application, consult your orchard spray calendar.



Green Cross B H C 50W (Benzene Hexachloride)

For increased control of Aphids and Pear Psylla, use B H C 50W. Recent tests in British Columbia have shown the effectiveness of Benzene Hexachloride in the control of most orchard aphids including the resistant Mealy Plum Aphid and the Woolly

Apple Aphid. It replaces difficult-to-obtain Nicotine Sulphate.

B H C 50W is a 50% Wettable Concentration of Benzene Hexachloride containing 6% Gamma Isomer. Consult your spray calendar for time of application and dosage.

Green Cross Micronized* Mulsoid Wettable Sulphur

The effectiveness of sulphur as a fungicide increases sharply as the particle size is reduced. When micronized, more sulphur surface is exposed... more deadly sulphur fumes are released, resulting in a greater kill of spores. Micronized Mulsoid Sulphur has been reduced to an average particle size 15 times finer than the ordinary 325 mesh sulphur.

In addition to micronization, Mulsoid Sulphur is 95% active and is instantly wettable. There is no tank sediment... Mulsoid Sulphur is held in perfect suspension.

For healthy, fine fruit, use Micronized Mulsoid Sulphur. Consult your spray calendar, under wettable sulphur, for correct application.

GREEN CROSS INSECTICIDES Are Manufactured By:

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